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THE
DENTAL REGISTER
OF THE WEST.

EDITED BY J. TAFT AND GEO. WATT.

PUBLISHED MONTHLY—$2.50 PER ANNUM.

CINCINNATI:
J. T. BOLAND, PUBLISHER, 37 WEST FOURTH STREET.
1860.

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THE

DENTAL REGISTER OF THE WEST.

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Original Essays and Communications.

THOUGHTS ON FANG-FILLING.

BY GEO. WATT.

"WHEN the nerves of teeth are destroyed, is it proper to fill the fang and crown, or the crown only?" This question was proposed for discussion at the meeting of the MISSISSIPPI-VALLEY ASSOCIATION, in 1853. As the reader would suppose, a majority, if not all the members present, advocated filling the fangs. At any rate, fang-filling has been *fashionable* since, and probably was before; and the man who claimed that he could fill the fang to the "extreme end" of the canal, could enlist the attention of his fellows, at any time, by proposing to tell them "how to do it." To insure success, it has been considered very desirable, if not essential, that the entire canal be filled.

We propose, now, to say a word in favor of the "crown-only" side of the question—to tell briefly why we believe that fang-filling is not the best practice, in the class of cases under consideration.

If a tooth be filled over a dead nerve or pulp, of course we expect that difficulty will result from the operation. The putrefactive process will continue, with a tendency to extension; and the gaseous products resulting from the decomposition of the dead pulp, will cause sufficient pressure to induce pain and irritation. Increased vitality in the periosteum is manifested,—inflammation is established, which, in such cases, usually terminates in suppuration, an abscess being the final result. It is evident that the inflammation of the periosteum is that which must be guarded against; and what is the most effectual method of preventing this, is the question before us.

As the decomposing matter in the canal is the usual exciting cause, we need be at no loss as to where we are to begin. The dead pulp should be removed,—the canal should be freed from all dead organic matter, whether it be pulp, membrane, mucus, or particles of food. It may be suggested that this is impracticable, and in some cases it is; but it can be done as well if we don't fill the canal with gold as if we do. But we will take it for granted that, after we have done our best, some dead matter still remains in the canal, and will, in view of this, detail our treatment.

We cleanse out the canal as well as practicable, and then arrest the putrefactive process, and fill the cavity of decay, leaving the canal unfilled. The putrefaction may be arrested by several methods. Any agent which will form, with the dead matter, a permanent and insoluble compound, will answer the purpose, provided it exerts no injurious influence on the tooth. If we had to rely on but one agent, we would prefer creosote. It has all the chemical properties which are required. Tannin answers the same purpose, but accomplishes the end more slowly. Chloroform will answer, but is so volatile that it soon passes away, thus rendering frequent applications necessary. Chloride of zinc and nitrate of silver may be used; but the compounds they form with albuminous matter are less permanent than those formed by creosote or tannin.

Having cleansed out the canal, then, we insert a pledget of cotton, moistened with creosote, and let it remain a day or two, with the cavity of decay merely closed with dry cotton. We then renew the application, and confine the creosote in the canal, by filling the cavity with wax, gutta percha, or something similar. The object of this is to retain the vapor of the creosote in the tooth, that it may permeate all parts of the canal. After a day or two, we remove the applications, wash out the cavity with water, and afterward with chloroform, dry it, and fill as above stated.

As there is nothing left in the canal that can putrefy, no danger need be apprehended from this source. And as to the foramen in the end of the fang, nature closes it up better than can be done with gold.

When the canal is filled throughout its entire length with gold, the fang, (and, of course, the periosteum,) is subject to sudden changes of temperature, on account of the conducting power of the gold; and this we believe to be a fruitful source of dental periostitis. In the method we adopt, this is obviated.

Since adopting this course, our success is much better than when we filled the fangs. We frequently tested both methods with the same care, in the mouths of the same patients; and the result is as stated above. We might report a number of cases, but, as we now adopt this method exclusively, they are so numerous, that the few we could find room for would seem insignificant, in comparison with the whole number.

This article, thus far, was written for the June number o the *Register;* and, since writing it, we have examined a number of cases which, at various dates, were treated as detailed above. We will allude to some of them, without attempting to be formal:

CASE 1.—Miss M. A. Aged 17, bilious-sanguine temperament, health good. The upper centrals and left lateral incisor were badly decayed, the pulps dead, and an absces at the root of the lateral. These were filled April 14th, 1859, after four days' treatment. At present, June 4th, there is no abscess, and no discomfort.

CASE 2.—Mr. L. O. Aged 30, a quadroon, healthy. Upper first bicuspids decayed, pulps exposed. The pulp were destroyed with arsenious acid, and the teeth filled

Feb. 19th, 1859, ten days after the first visit. June 1st, both doing well.

CASE 3.—Miss L. F. Aged 15, sanguine temperament, good health. The upper cuspidati decayed, pulps exposed. Destroyed the pulps, and filled, Dec. 11th, 1858, two weeks after the first application of the arsenious acid. Exposure to a storm, two weeks afterward, was followed by periostitis, which terminated in resolution, after active treatment. May 20th, teeth doing well.

CASE 4.—Mrs. F. Aged 29, nervous-sanguine temperament, health delicate. A lower second molar, badly decayed, pulp dead. Treated the case a week, and filled, Jan. 21st, 1859. The tooth was comfortable, May 10th, and had not been otherwise, except a slight soreness a few days after it was filled.

CASE 5.—Miss C. Aged 20, sanguine temperament, health good. Upper first bicuspids decayed, pulps exposed. Destroyed pulps with arsenic, and filled, Nov. 17th, 1858, after ten days' treatment. Teeth remained comfortable till April 20th, 1859, when one was attacked with periostitis, which was subdued without the formation of an abscess.

CASE 6.—Mrs. A. Aged 32, nervous-sanguine temperament, healthy. A first upper bicuspid decayed, pulp dead. Cleaned out the canal, washed it with chloroform, then with creosote, and filled the tooth the same day, Dec. 5th, 1858. This tooth has remained comfortable till this date, June 4th, 1859.

CASE 7.—Mr. B. Aged 21,—in all other respects like Case 6. Filled, Dec. 3d, 1858, and was all right, June 1st, 1859.

CASE 8.—Miss M. Aged 17, sanguine-lymphatic temperament, health not good. Upper central incisors decayed, pulps dead. Treated a week, and filled, Oct. 16th, 1858. Teeth doing well, and had caused no discomfort, June 1st, 1859.

CASE 9.—Mr. J. F. Aged 24, sanguine temperament, healthy. An approximate decay in a superior wisdom tooth, pulp exposed at a small point. Capped and filled, Oct. 2d, 1858. Inflammation and death of the pulp followed. Removed the filling, treated with creosote two weeks, (unable all the time to reach the canals in the fangs,) and filled the central cavity, and the cavity of decay, Dec. —, 1858. June 4th, 1859, the tooth is doing well, and has caused no discomfort.

This report of cases might be greatly extended, but this will suffice. We have not seen a case of abscess, following the treatment here described, in the last year. We are satisfied with our success, and shall continue the practice.

CHLORIDE OF ZINC.

BY J. TAFT.

IN the hands of the surgeon, this is one of the most powerful and efficient escharotics. In the hands of the dental surgeon, when properly employed, it is equally efficient; with it, results are obtained more promptly and efficiently than with any other agent. It is used by the dentist chiefly for destroying exalted sensibility of the dentine. In the great majority of cases, it destroys the sensitiveness of a considerable lamina of the diseased portion, in a very few moments. While this is being accomplished, by the pure crystal chloride, a sharp, pungent pain is experienced by the patient, which, in highly sensitive constitutions, is almost intolerable; and this prevents many operators from using it at all. Various means have been employed to obviate this difficulty,—such as diluting with flour, and plaster of paris, or applying with it chloroform or creosote, or something of this character. All these, except chloroform, are in some respects objectionable.

There is an article in the May number of the London *Lancet*, by J. C. Wardsworth, in which he recommends diluting the chloride with oxyd of zinc: he recommends this preparation for surgical use.

I have prepared it, and been using it, as an application for sensitive dentine, with very good effect. Its action is less rapid but quite as efficient.

The oxyd of zinc is a very proper material with which to dilute the chloride. When applied to sensitive dentine, it produces far less pain than the chloride alone, though longer time is required to produce its specific result.

It is prepared by mixing and triturating equal proportions of the dry chloride and the oxyd of zinc.

"The mixture should be preserved in a wide-mouthed bottle, having an accurately-fitting stopper; it is said a chemical combination occurs between the chloride and oxyd, but, so far as can be decided, no great loss of activity will result." It is difficult to keep the pure chloride from deliquescence. When exposed to the air, it contracts water very rapidly, and by this means, parts with much of its chlorine, and so loses its efficient principle.

When pulverized with the oxyd, however, this difficulty is obviated; for the mixture remains a perfectly dry powder.

The pure crystal may be kept perfectly free from change in chloroform.

CASE OF SENSITIVE DENTINE.

BY J. TAFT.

DEC. 24th, 1858.—Mr. L., aged 30, bilious-sanguine temperament, called to have two superior molars filled; the second superior molar of the left side, with a crown cavity, and the first superior molar of the right side, with an anterior proximal cavity, both large. On excavating, considerable sensitiveness of the dentine was found to exist, particularly immediately beneath the enamel, and very little elsewhere. The pulps were not affected by the decay. After the cavity in the left tooth was formed, it was very slightly sensitive; not sufficiently so to be unpleasant to the patient. No application was made to allay the sensitiveness. The tooth was well filled with gold. The cavity in the other tooth being excavated, was quite sensitive till the excavation was completed, especially round the border of the cavity. As the patient had good powers of endurance, it was not deemed necessary to make any application to destroy the sensitiveness; and so the cavity was filled, with considerable sensitiveness remaining, as above described. The introduction of the filling, however, gave no pain of consequence; it was well filled and finished in the usual manner. The first of these exhibited no sensitiveness for three or four weeks, but after the lapse of about that time, it became very sensitive to cold or heat, so that a very slight variation of temperature produced intense pain; the other was very sensitive to heat or cold from the first. So great was this difficulty, that both teeth were rendered almost useless in mastication. They continued in that condition, with unabated intensity, till the 13th of June following.

The patient was in good health, and constitutional treatment was not indicated. On the 13th June, I removed both fillings, and found the dentine immediately beneath the enamel in both teeth, very sensitive; the dentine elsewhere in the cavity was not sensitive. The cavities were excavated, till it was ascertained the sensitive portion could not be cut away. Chloride of zinc with chloroform was then applied; and in about one minute the sensitiveness was wholly destroyed. I then filled both teeth, and am now awaiting the result.

Was there any method of remedying the difficulty without removing the fillings?

Will the difficulty be liable to recur?

Why does the dentine become more sensitive in such cases after filling?

☞ Electro-Magnetism, in the extraction of the teeth, still proves well. I use it quite as frequently, and am better pleased if possible, than hitherto. T.

TREATMENT OF GOLD FILINGS.

BY L. C. WHITING.

I HAVE been reading Dr. Geo. Watt's interesting article, in the last number of the *Register*, on the management of gold alloys, and like it very much. What dentists want the most, is not how to make fine gold, but the easiest way of working their filings and old gold plates into gold that can be used for plates or used up in their practice to the best advantage.

I have had some practice in refining gold, for the last twelve years, and have tried every plan that the best workmen have recommended, and have finally come to the following, as the best for my purpose:

When my filings have accumulated sufficiently, pass them through a fine sieve to get out all the small pieces of plate that are malleable; do not mix them with the filings, until the filings are melted and in working order. Pass a magnet through the filings, to get out all the iron and steel that may have worked in from your file or otherwise. Add all the old backings of teeth and pieces of plate that have any solder on them; put it into a good-sized crucible, with as much pulverized saltpeter in bulk as there is of the gold; cover it with a smaller crucible and heat up slowly until well melted. As soon as it is all melted, set it off and let it cool in the crucible. Break the crucible, and you will find a button of soft malleable gold, which can be remelted with other gold, or, what is better, used for clasps and backings to teeth. If it does not work well the first time it is melted, and will hold together to roll, pass it through the rollers and make it *very thin*, cut it up with the shears and treat it again the same as the filings. This method has worked much better with me, than the old method of adding saltpeter after it is melted.

Don't allow it to stand over the fire long after it is melted. Never heat very hot or for a long time.

Never use any borax or flux of any kind in melting gold that works well; or at least, what you do use, rub on the crucible to keep the gold from sticking when it is poured. Good gold plate can be made by adding one cent's worth of silver coin to a dollar's worth of gold coin.

REMARKS ON WISDOM TEETH.

BY ABR. ROBERTSON, D. D. S., M. D.

MESSRS. EDITORS: In accordance with my promise, I herewith send you a few hastily written, though long considered, observations on some of the lesions occasioned by the eruption of the wisdom teeth, and on the best method of removing that class of teeth.

That the wisdom teeth produce many and very serious lesions, is abundantly evident without the citation of any cases. I have myself had most convincing experimental personal proof of the fact in two well-marked cases—my own two lower wisdom teeth. And I studied their history, progress and character with *most intense interest*, at intervals longer or shorter, and more or less frequent, for three, or two years at least; and I have been observing their effects in others now these twenty years. But it was shown in your last number that it is not by "lateral pressure" that the wisdom or any other teeth give us pain or any other serious cause of complaint. How, then, do they so affect us? In various ways. First, as all other teeth do, or at least are liable to do, by the pressure (generally perpendicular, but may be horizontal or diagonal, the direction of the pressure being entirely immaterial) of the tooth upon the gum in its effort to force its way through it. The pressure spoken of, being that necessarily produced by the formation and development of the tooth; sometimes causing inflammation, pain, etc.

Sometimes, when the tooth comes through the gum in a horizontal or in a diagonal direction, with its grinding—or, in such cases, more properly its multi-cuspidated—surface against the cheek, (I suppose I ought to say buccal muscles, or the mucous membrane lining the inner surface of the buccal muscles, instead of plain cheek,) if the cusps happen to be sharp or a little rough, irritation and inflammation may be produced by attrition.

Sometimes, again, when the space between the jaws is small, and the tooth in one jaw—the antagonist to the one now coming—has already acquired its full length, and, as occasionally happens by the coming tooth being backward in its coming, more than its proper length, and therefore occupies more than its due proportion of the limited space between the jaws, the gum is so far raised by the coming tooth as to bring it in contact with its antagonist, so that at every occlusion of the jaws it gets bruised between the opposing teeth, and thus, temporarily, a good deal of discomfort is produced.

Again, finally, and by far the most frequently, and worst of all, where, as in the preceding case, the space between the jaws is less than the length of the crowns of two teeth, or where one tooth by long priority in coming has taken to itself more than its due proportion of the space designed to be equally divided between the two, room enough is not left for the projection of the entire crown of the other through the gum. And as the gum can form no attachment to the crown of a tooth—the enamel having no periosteum—it remains a kind of open sack or pouch about the tooth, as deep as the unprotruded portion of its crown. Sometimes there is only room for a very small portion of the crown to come through the gum, even to only one or two of its points. Then the sack has a depth equal to the whole length of the crown of the tooth. This forms a ready receptacle for food, saliva, or any other substances taken into or secreted by the mouth, where they may be retained till they are decomposed and produce irritation more or less, which may result in inflammation, ulceration, the burrowing of pus deep in the cellular tissue, forming abscess, causing necrosis, exfoliations, and all the other ills consequent upon severe inflammation. These more serious lesions, so far as my observation goes, are confined to the lower jaw; and for the reason that, I believe, the upper wisdom teeth are usually first in coming, and are therefore most fully protruded through the gum; but chiefly for the reason that if the food or other substances were forced by mastication or otherwise, under the edge of the gum on the upper jaw, the force of gravitation would tend to remove it, and would generally do so before it could do much harm; whereas, in the lower jaw the same force would tend to keep it there.

In regard to treatment, very little need be said; for if the crowns of the opposing teeth have already met before they are fully protruded through the gums, and especially if the lower tooth is, and can be, but partially protruded, the only effectual remedy that I have ever found is the removal of the tooth; thus obliterating the sack and preventing a recurrence of the trouble. But where the trouble is only the irritation or slight inflammation, produced by the tooth forcing its way through the gum, an incision, or at most a slight excision, of the gum may be all that is necessary to afford entire relief. But, as from this cause the discomfort is usually but temporary, even this or any other treatment is comparatively unimportant. But since extraction, in most of the cases that are of any consequence, is the only remedy to be relied on, the best means of removing the wisdom teeth becomes a question of very serious importance.

A correspondent of the *Dental News Letter* for April last, asks if any one knows a better way of extracting the wisdom teeth, where the jaws were so nearly closed by swelling occasioned by the eruption of such a tooth, that he could not get his mouth open "but a little" *after forcing it with a wedge*, than by the use of the turnkey! Allow me to say, that I can not conceive of a worse way. I had supposed—and do suppose—that the key had been laid aside by all well-educated dentists long ago, and that now it was only to be found among the antiquarian collections of the bygone days of barbarity; or at most only among the instruments of some few "old-fogy" operators who do everything just as they were taught to do it, and continue to do it so just because they were taught to do it so; who still twist their foil into little ropes or strings preparatory to inserting it into the cavities of teeth; who take all their impressions in "pure yellow beeswax;" and who still use zinc for making the dies with which they swage their mouth-plates. But even allowing the key to be—what I do not allow—an appropriate and useful instrument, in some cases, or even for certain classes of teeth, as some, perhaps, still claim for it, the anatomy of the teeth and jaws, both, most clearly forbid its use, even under the most favorable circumstances, in the extraction of the lower wisdom teeth; and a more barbarous operation than attempting to extract a wisdom tooth with a key, when the face is so much swelled as so nearly to close the mouth as to leave only enough room between the teeth to allow the hook of the instrument to pass, and only by the use of some small instrument to aid in pushing it along, at that, as described in the article "on extracting wisdom teeth" before alluded to, I can not readily imagine; for it is perfectly evident that the only action that the instrument could possibly have, under the circumstances, would be either to break the tooth or to tear away the alveolus. And if breaking off the crown of the tooth, or of removing a portion of the alveolus was the object in view, that end could be far more easily and safely attained than by wrenching them off with a canthook or turnkey.

But there is another question in the short article alluded to, not less ill-considered than this—"What was to be done then? Take out a sound tooth to make room for the forceps, or resort to some other instrument?"

Is it not plain that if, from any cause, the jaws are inseparably closed and the arch of the teeth unbroken, the wisdom tooth is the only one that can possibly be removed except by violently breaking off its crown. Take out a sound tooth to get at the wisdom tooth, indeed!

But, as I said in relation to "*lateral pressure*," this would not be worthy of any consideration, except for the *quasi*-endorsement it receives by being published in a respectable dental journal, and without comment by its editors.

I have said that anatomy forbids the use of the key, especially in the extraction of the lower wisdom teeth. It does so, first because a very large share—a very large majority, I think—of the roots of the lower wisdom teeth are more or less hook-shaped, or at least approximating to the form of the segment of a circle; sometimes, indeed, a large portion of the root stands almost at a right-angle to the crown, and the foramina, as in all other cases, looking toward the ramus of the jaw.

Now it is evident that the turnkey can not be applied to a tooth shaped as described and situated like the wisdom teeth, in the very back part of the mouth, so as to apply force in the direction required easily or safely to remove it.

The force of the key, when properly applied—if there can be any proper application of an improper thing—is upward and inward or upward and outward, as the case may be; whereas the only force that can act directly for the removal of such a tooth, without certainly breaking the tooth or the surrounding bone, must be upward and *backward.*

But not only the anatomy of teeth but of the jaws, render the turnkey, and not only that, but the forceps too, but poorly adapted to the extraction of that class of teeth. At that part of the jaw there is but little, if any, alveolar process, and the jaw is broad, and nearly flat upon its top, so that there is no opportunity to apply either the hook of the key or the beaks of the forceps any lower than just at the base of the crown, with an almost certainty of breaking off or of crushing the tooth. When forceps are used in the extraction of any molar tooth, the points of its beaks should always enter the bifurcation of its fangs in order to act with certainty or with safety. This can but rarely be accomplished on the wisdom teeth.

Their situation in the mouth, too, sometimes renders the application of either of these instruments difficult. The narrow space, also, between the upper and lower jaws sometimes also prevents the application, with safety to the mouth, of sufficient force to remove the tooth with the forceps, even if they could be otherwise properly adjusted.

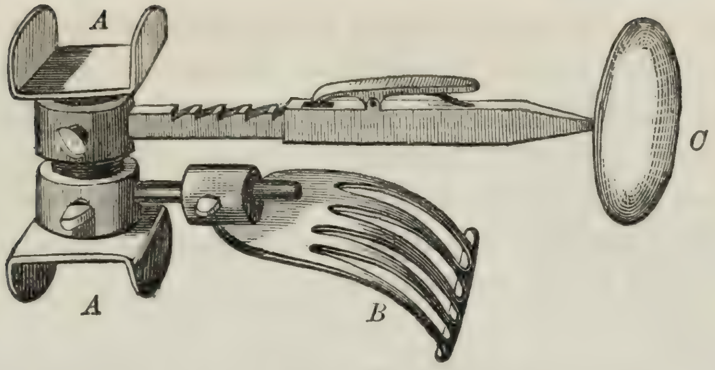
For these reasons, for many years past, I have but very rarely attempted to extract any lower wisdom tooth, if the tooth next front of it had not already been removed, with any other instrument than the elevator. The one I use is a modification of the common straight elevators of the shops; being bent backward in the shaft just behind the spear-like shaped heads at an angle of about twenty degrees. This form greatly facilitates its introduction between teeth so far back in the mouth, and also adds very much to its power.

I scarcely need say, that the instrument is used by inserting its point freely and firmly between the necks of the tooth to be removed and the one next front of it, using the front one of the two—second molar—as a fulcrum for the instrument. By giving it a slightly rotary motion, it acts as a powerful lever, and exerts its force in the exact direction required to remove teeth situated and shaped as these usually are. The wisdom teeth can be removed, too, with this instrument, without difficulty, with the jaws closed to any extent short of absolute occlusion. It is a powerful instrument, and of course, like all other instruments, requires care and skill to use it properly.

Wheeling, Va., June, 1859.

◆

THE D. M. C. of the Ohio Dental College, says that he has discovered a new remedy for the treatment of DENTAL PUPS, which will knock thunder out of the "Eastern Liquid Quarts," four to the gallon. A. P.



DENTIST'S ASSISTANT.

BY J. TAFT.

THE accompanying cut represents a very ingenious and useful instrument, invented by Dr. C. C. THOMAS, of Natchez, Miss. The instrument is to be placed in the mouth of the patient, while the teeth are being filled, particularly the inferior molars. The object of the instrument is threefold: to keep the jaws asunder, the tongue down, and the cheek distended. The instrument is so made and articulated, that the distension of the jaws can be graduated according to the size of the mouth. The jaws rest upon it at *A*, so that they do not become fatigued by the mouth being kept open for a long time. The tongue compressor *B*, can be adjusted to any desired position, either backward, forward, or extended. The cheek-distender, *C*, can be extended so as to press the cheek entirely out of the way; it can also be rotated on the main shaft, and the part in contact with the cheek thrown back or forward, as the case may require. The whole is made of silver, and is very neat. When properly adjusted in the mouth, the operator has free use of both hands in manipulations.

It is well to pack round and on the tongue, folds of paper or napkin, then put the tongue-holder upon these; and in a great many cases, there will be no discharge of saliva from the sublingual or submaxillary ducts, even during a protracted operation; and in every case, it will be very much checked. It is a very valuable instrument, and one that I would not be without for thrice the cost. TOLAND furnishes them, at $10 each.

☞ The following reply to Dr. Richardson, by Dr. Dills, is sharp, and strikes *heavy blows*, though we are not quite certain that they all reach the object aimed at; of this, however, every one must be his own judge. We are pleased to see that this discussion is *now* on principle instead of personalities, and we hope that in future, all such discussions will be kept in this channel.—Ed.

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DENTAL ADVERTISING—VERSUS—DENTAL ETHICS.

BY C. C. DILLS.

Reply to "Dental Advertisements"—by Dr. J. Richardson.

That dental writers are lamentably *theoretical* is a fact acquiesed in by all:—and while this state of things exists only with reference to matters arbitrary, or wherein no violence is done to principle, or *ethics*—lookers-on are excusable for non-interference:—otherwise they are not.

"The dental profession is in its infancy," (*Slosson*) and prominent among matters claiming its attention is its *ethics*. This fact has not been disregarded, while strict ETHICAL PRINCIPLES may have been, in a too whole-sale treatment of the subject—or by the "slip of a too hurried pen"—*or* by one wielded by hands not wholly unsullied by efforts to accomplish *private ends*, under so soul inspiring a garb.

"Many times and oft" we have thought some modern views of dental ethics *too progressive*, if not *absolute conflictions* with moral rights possessed by every man—and with which *ethics* should ever harmonize. Yet we have been deterred from remonstrance, either "from feelings of delicacy towards the profession," *or* from a knowledge of the *fact* that even flagrant errors, adduced in behalf of *ethics* are generally supported, on the one hand, because they are hoped to err in the *right direction:*—and on the other, because to oppose them would be to run imminent risk of receiving at the hands of some "occupying high stations in the profession" "a tremendous letting" *down* by a *simple twist* of *their* almighty wrist.

We find several of these objectionable views conveniently *compiled* for us, in a recent article on "Dental Advertisments by J Richardson," and will have the *fool hardiness* to combat them;—asking the sympathy (in view of the *animal* force against us) of the profession—*only*, as, *by legitimate deductions* we prove said compiler's pen to have been "too hurried"—"or wielded by hands not wholly unsullied," &c.—and backed by a mind incapable of laying "aside every weight and the sin which doth so easily beset" it, and pressing forward to the possession of truth, equity and right *only*. It is the "judgment" of Professor Richardson that, "Dental advertising should be limited to a simple announcement of the practitioners name, title, and place of business;"—all of which *sounds very well*—we might say *desirable*—aye that "it is a consummation devoutly to be wished:"—what then? is it *therefore* correct, practical—*utilitarian!* and shall it *now*—and the *world over alike*—be made "a standard of legitimacy!" (*And especially before* the legitimation of the matter—and while it is unheeded on all hands—shall it be considered in harmony with dental ethics—(we make no appeal to moral principle) that the offender (?) be—*indiscriminately*—save as maliciousness may dictate—"*summarially* read out" of the profession,) We think not, *many* think not, and nine tenths of the profession utterly ignore any such would-be rights on the part of a profession, to the usurpation of ones own prerogative and inherent moral right, to manage his own peculiar affairs,

But let us pass to more significant facts and deductions, and inquire—*what are ones undeniable rights*, moral and political;—and make our deductions from them with reference to "Dental Advertising" *viz Ethics*,

"We hold these truths to be self-evident, that all men are created equal; that they are endowed by their Creator with certain inalienable rights: that among these, are life, liberty, and the pursuit of happiness."

It is likewise "self evident" that in "the pursuit of happiness" is recognized the right of *vocation*, with subordinate rights—to be established by municipal governments, and among which is that of *advertising* said vocation. Now while unlimited license is *taken* in advertising, it is yet an easy matter to *define limits—within which we may act and claim immunity from the "judgment" of any man—or set of men—short of* "in Congress assembled;"—(*And further—for any man to advance as his "judgment,,, views so striking at the foundation of these "inalienable rights" as are those of J. Richardson's—and "presto" would legitimize them*—IS ARROGANCE CONSUMMATE, PITIABLE!—"Let no such man be trusted"—*with handling Dentel ethics.*

The business world has defined these limits, and so self-evidently in harmony with both *rights* and *ethics*—that we give them, *as sanctioned by the late "Ohio Editorial Convention"* —without comment.

"An advertisement should set fourth fully the capacities of a business, or, in other words, should present in detail the particular inducements offered in selling them, their quality—style, prices &c, In short he must embody in his advertisment *just what he would say to an individual, were he to visit him to solicit his patronage. An advertisment should be plain —concise—and truthful.*"

Herein—gentlemen of the profession do I stand—*and act:*—ready by *you* to be judged, and pay the penalty (?) of my doings!—

> "*Yet* such extenuation let me beg,
> As, in reproof of many tales devised,
> By smiling Pick—thanks and base Newsmongers,
> I may, for some things true, wherein my youth
> Hath faulty wander'd and irregular,
> Find pardon on my true submission."

Again, as "Calumny, though known to be such, generally leaves a stain on the reputation:"—I would remonstrate that "All are not thieves that dogs bark at."

Nothing is more apparent than the feeling prompting "Dental Quacks No. 3, by H. R. Smith" and "Dental Advertisements by J. Richardson," when considered in relation to our article on "Dental Quacks"—and the relation in which these gentleman stand one to the other. To these gentlemen would we extend the hand of congratulation, that "the mark of the prize of their high calling" is *so high:* and that upon its attainment, there is in store for them a profession's love and gratitude—inasmuch as they have *saved it*, and purged it of all sin and uncleanness," by "*a process* of *active medication*,,

We had desired to notice other *judgments* of these "fast gentlemen," "but space at present forbids:" before being "read out" *loud* however we may have occasion to refer to them again;—in the meantime we will pursue the even tenor of our way—advertising to our patrons very much after the manner we would talk to them—*or the profession:* and where we can only say a *few words*—will *exhort* them—"for Heaven's sake" "see small bills:" (of which we are just now having some struck off, and will *send out*, of course: hoping for them as wide circulation, as has favored our former advertisments.)

ANOTHER DENTAL PATENT.

BY W. M. HUNTER.

IN both the March and June numbers of the *Dental Register*, and in the April number of the *News Letter*, are Editorials, ushering into notice what they call "something new," "a new method of mounting teeth." These notices say *just* enough to excite interest and curiosity, and *too little* to give any information; they were cunningly devised, and their insertion secured by one accustomed to such operations, to serve the special purposes of the so-called inventor of a style of work, which has been experimented with, years ago, and abandoned as impracticable for anything except building-on an additional masticating surface on the inside.

Agents are already canvassing for the sale of instructions and rights, and it was *intended* and *expected* by those most interested, that with the aid of these introductory editorials, with handsome specimens and shrewd agents to travel over the entire country, within a period of six months or a year, that rapid sales for cash could be effected at whatever prices could be obtained, depending entirely on the enthusiasm, gullibility and pecuniary condition of their *victims.* From $40,000 to $50,000, it was thought, would be a small estimate of the amount to be realised from this operation, all of which must be accomplished before the vileness of the humbug could become generally known. Thus it was intended to *fill their pockets* at the pecuniary loss, and, also (unless their eyes were opened before placing work in the mouth,) at the sacrifice of the reputation of those to whom they sold.

A patent has been applied for, and *when issued*, it will be *worth* just precisely its bulk in *blank paper.*

The claim is for "uniting teeth to plate by means of AMALGAM," and forming a rim to the same.

The process is simply this:—Having struck up your plates, ground, arranged and articulated your teeth in the usual way, flatten and bend the pins and invest the outside of teeth and plate in a mixture of plaster and sand or asbestus to retain them in position; then prepare your amalgam of gold or silver (as the case may be) with mercury, (either filings or precipitates may be used,) triturate well and press out as dry as you can with heavy pliars the free mercury; then, with a blunt instrument, pack the amalgam over the teeth down to the plate, to the fullness desired, filling every crevice under the teeth, etc.; then invest the inside of teeth and plate (over the amalgam) with plaster and sand or asbestus, and cut from the outside whatever is necessary to expose the surface to be occupied by the rim; pack on the amalgam as before, and cover with the plaster and sand; then cut two holes, one at each extremity of the jaw, through the investient down to the amalgam, to allow the mercury to escape; then place in the oven of a stove or in any position where a heat of from 680 to 700 degrees can be applied, for four or five hours, or sufficient time to evaporate all the mercury; after the mercury is all evaporated, renew the investients, and if additional strength is required, cover the surface with a solution of borax, and flow solder over it, so that it will pass through the pores or cells down to the plate; then burnish and polish.

It is said that this work is got up "without heat or any soldering whatever." Now, it is apparent that it can not be got up without *heat.* It would be well to examine the *specimens* exhibited, to see if the teeth are not first *backed* and *soldered* on in the usual way. I challenge the authors of this new humbug to produce a piece of work suitable for the mouth, with no other than amalgam union, which I can not break with my thumbs and fingers. Any work which can be so broken, is not sufficiently strong for the mouth, except in *very* favorable cases.

There are a great many reasons why this work is objectionable. I will mention only a few:

1. It is porous, admitting the fluids of the mouth to be absorbed and lodged in the cells vacated by the mercury, from which it can not be removed by any ordinary cleaning; it must, therefore, remain and become putrid and offensive, presenting a beautiful appearance of cleanliness, but in reality, filthy beyond description.

2. Sufficient strength can not be obtained, except by either first backing and soldering in the usual way, or else afterward flowing solder through the cells in the amalgam.

3. The ease, facility and economy with which work can be made, possessing the merits claimed for this, without its faults, viz:

Attaching teeth to plates by the use of block tin, either by pouring like cheoplasty, or by soldering with a tinman's soldering iron; the tin gives sufficient strength, and is free from porosity, therefore clean, and is less subject to oxydation in the mouth than even *pure* silver.

As before remarked, this subject was experimented with, years ago. The difference is simply that those who then experimented had sense enough to stop when they found it *worthless*; but it was left for the genius of a Slayton (inventor of *Slayton's gutta percha base*),—fresh in the memory of the profession—to develope this new and wonderful work, after it had been discarded for years by others. Verily—

> "A *little* learning is a dangerous thing."

Proceedings of Societies.

CINCINNATI DENTAL ASSOCIATION.

Cincinnati, May 10, 1859.

Dr. **Bonsal** related case of boy, æt. twelve years, who had been struck with a bat, fracturing the processes and partially dislodging the right superior center and lateral incisor teeth. These teeth were forced from their sockets by the blow, and found hanging loosely with their cutting edges over half an inch below the circle of the adjoining teeth. Softened gutta percha, moulded into proper form, was pressed against the displaced teeth, carrying them back to their proper place, and were retained *in situ* by a bandage passing underneath the chin and over the head. This was removed, from time to time, to permit the patient to take food and drink, and was worn for two weeks and removed. At the end of about one month the parts had healed without any unpleasant sequellæ, and the teeth acquired their usual firmness. Dr. B. could not state, not having seen the patient very recently, what amount of discoloration, if any, had taken place in the injured teeth.

Dr. **Irwin** also reported case of man about twenty years old, with anterior displacement of the inferior incisor teeth with fracture of corresponding portion of the anterior walls of the processes. The patient, in a personal encounter, had seized hold of his adversary's finger with his teeth, and the latter in attempting to relieve himself, wrenched the lower incisors from their sockets, carrying with them the anterior processes. The teeth and fractured portions of the jaw were pressed back into the circle and retained in place by ligatures attached to the molar teeth. The parts united by first intention and healed kindly within a few weeks.

Dr. TAFT expressed continued confidence in the use of nitric acid as an application to exposed nerves, preparatory to filling. Had treated some fifteen or more cases with invariable success.

Dr. RICHARDSON had also experimented with same remedy, with satisfactory results.

A case of exalted sensibility of dentine, after filling, was related by Dr. Taft, the details of which will be found in present number, page 10.

J. RICHARDSON, Sec'y.

DELEGATES OF THE MISSISSIPPI VALLEY ASSOCIATION.

AT a called meeting of the Mississippi Valley Association, June 22d, 1859, the following members were appointed delegates to meet at Niagara, in accordance with the call published in the last number of the *Register:*

Drs. J. G. Hamill, Lancaster, O.; S. L. Hamlen, Cincinnati, O.; H. McCullum, Augusta, Ky.; A. G. Stipher, Decatur, Ill.; R. Peckover, Paris, Ky.; J. F. Mercer, Canada West; C. N. Woodward, Ripley, O.

On motion of Dr. Bonsall, it was

Resolved, That the delegates have power to fill vacancies in their own number, from any members of the Association who may be present.

On motion, adjourned. G. W. KEELY, Pres't.

GEO. WATT, Sec'y.

DELFGATES OF THE OHIO DENTAL COLLEGE ASSOCIATION.

AT a called meeting of the Ohio Dental College Association, June 22d, 1859, the following members were appointed delegates to meet at Niagara, in accordance with the call published in the last number of the *Register:*

Drs. H. A. Smith, Jas. Richardson, J. T. Toland, J. Taft, Cincinnati, O.; A. Berry, Raymond, Miss.; G. W. Keely, Oxford, O.; Geo. Watt, Xenia, O.; J. S. King, Zanesville, O.; W. B. Webster, Richmond, Ind.; J. P. Melroy, Lawrance, Ind.; C. B. Chapman, Madison, Wis

On motion of Dr. Watt, it was

Resolved, That the delegates have power to fill vacancies in their number, from any members of this Association who may be present.

On motion, adjourned. B. BONSALL, Pres't.

J. TAFT, Sec'y.

DISCOLORATION OF GOLD FILLINGS.

THE patient occasionally asks,—If dentists fill teeth with pure gold as they say they do—why do some of the plugs turn black?

Never having heard any cause assigned, I shall give what I think is the leading one. It is the abrasion of the steel instruments used in inserting the filling into the tooth; small particles of the steel incorporating themselves with the gold, and by oxydation in the mouth, form a coating over the plug, which by a little polishing is easily removed, leaving the filling as bright as ever; but the patient has a right to know why the discoloration. We find inventions and inventors daily increasing. Could none of these find out a metal, from which to make pluggers that would have all the required properties for filling teeth, without spoiling the beauty of the filling? J. D. WINGATE.

Correspondence.

Louisville, Ky., June 14, 1859.

J. T. Toland, Esq.—Dear Sir: At your solicitation, on a very short notice, I send for your disposal a few sentences on the subject of Amalgam as used in mechanical dentistry. Perhaps a less objectionable name, amalgam, should be chosen for the "New Method of Mounting Teeth," as, to many, that much abused material savors of charlatanism, particularly when used IN A DENTAL sense. There certainly IS something in a name, Shakspeare to the contrary notwithstanding.

Crystal silver work! sounds very silvery. Crystal gold *mounting!* would be a high-sounding name, and though suggestive of Pike's Peak, might not be objectionable.

But to the point, and to relieve the minds of the anti-amalgam readers, let their prejudice on that head evaporate into "thin air," as is the mercury *evaporated* before the work goes into the head of the patient. To be brief, I shall simply give the process as I have practiced it, that others who have an eye to the so-called improvement, may be better able to judge of its probable merits, and to give it a trial for themselves. The plates are to be swaged up, in the usual way, and if the ordinary gum teeth are used, grind and back them as if to be soldered. While encased in plaster, score (roughen) the linings of the teeth and the plate to the extent necessary,—wash with alcohol and brush, to remove all grease, wax, or dirt; apply a thin coating of mercury to the roughened surface, to insure cohesion, before working on the amalgam, which should be applied in as *dry* a state as possible, for, in proportion to the quantity of mercury to be driven off, will the work be dense or porous.

The amalgam must be made with precipitated metallic silver and distilled mercury. It should be washed in a mortar with alcohol as long as the latter continues to be discolored. Very much depends on having pure materials and clean surfaces for this style of work. The material may be worked on with a plug-file and one or two other flat and pointed instruments for working in close places. Slope the amalgam on the palatine surface, producing as natural form as the case will allow. Build up a little beyond where you want the work when finished, as, after the mercury is driven off, the crystals are susceptible of being *condensed.* A finish over the top of the gums may be made with this material which, in point of beauty, surpasses any other style of "riming." It is for this purpose that I have used it more than any other. I always doubted its strength to withstand the pressure of mastication; I am now testing it, however, in this way.

The work moulded, the next step is, to dispel the mercury by the application of heat. This must be *slowly* and gradually applied—and the temperature should not be raised above two or three hundred degrees. To protect the teeth, suspend the case of work in a tin or sheet-iron cylinder, large enough in diameter to receive it, and twelve or fifteen inches in length. Place a small spirit-lamp below—leaving sufficient opening above to allow the fumes of mercury to escape. From one to three hours' time should be allowed for the evaporating process.

The vessel should be set in a flue or where the vapor will be carried away, as it would be deleterious to inhale.

The work cool, proceed to condense, file, rub down and finish as you would a crystal gold plug.

The work presents beauty and apparent strength, but its solidity is only superficial. It is my opinion that in time, the fluids of the mouth will find their way through the more porous body, and cause it to become rancid and brittle, like the interior of the first sponge gold-fillings that were made.

In addition, I can only say that some *riming* which I did in this style, both with gold and silver, some two months ago, still looks well. I hope some others who, perhaps, have more time than myself to experiment in this direction, will give it a trial, and report. J. A. McCLELLAND.

A SUGGESTION.

Messrs. Editors: Seeing "a call" for a "convention" to form a "National Association of Dentists," a thought has occurred to my mind which may be of some importance to those interested in the formation of this new "association," and with your permission, I would here offer it to the consideration of all those who may be "selected" "to go" to this important meeting.

The suggestion is: That the "delegates" to this convention, choose, as the only fit personage to preside over the destinies of the "National Association of Dentists" in the United States of America, his excellency the Grand Duke of *Tusc*-any. *Any* other *Tusk*-doctor would scarcely be so fit as the *grand duke.* And if the Emperor of Austria can spare his excellency, and whip *Ec. paron Louis!* without him, every effort should be made to get the duke over in time for this new conventien. He certanly would purge the association of its "*democratic*" element, and place it at once on a high and honorable basis.

I remain yours, very truly, Bourbon.

Selections.

☞The following extracts, from a lecture, by Dr. B. W. Richardson, delivered before the College of Dentists of England, treats concisely of agents that exert a pernicious influence upon the teeth, both direct and indirect. He takes each agent separately, and briefly sets it up in full view, so that it may be examined in detail. An analytical investigation of the various causes that produce disease of the teeth, has received comparatively but little attention, especially by dentists of our own country. We have busied ourselves with the art, to the neglect of the science, of the profession. The declaration that has been so frequently made, that the Profession in the United States is in advance of that of any other country, is only true, if at all, in the practical department. These lectures of Dr. R.'s have an analytical character which we are much pleased to see. There is a deep hold taken upon the subjects under discussion, and not a skimming-over the surface, as we too frequently see. These lectures are valuable to all, but especially to the dental student.—Ed.

But one poison, much more important than any other to the surgeon-dentist, is of the class that passes through the system to the tooth-structure, and inflicts its mischief in no other way. I refer to *mercury.* We have experimental proof of the constitutional medium in this case. The poison may be rubbed into a limb, may be taken by the mouth, may be inhaled in fumes, but the effect, if the effect is carried far enough, will, *cæteris paribus*, be the same as regards the dental structures. The partially disintegrated and poisoned blood, as it bathes the tissues of the body, injects the vascular structures and refuses nutrition to those of fibrous or vascular build; hence the mercurial malady in relation to the teeth begins not in the tooth structure truly, not in the surrounding bone structure truly, but in the membrane that connects tooth and bone—the periosteum, and in the vascular structure which encircles the teeth to their crowns—the gum.

In the after steps of the process, the body of the tooth does, however, in its turn suffer; partly, it may be, from the tooth itself being bathed in poisoned saliva, but more decidedly from the destruction of the connection between the tooth itself and its socket, and, by implication, of the vessels which supply to the inner structure of the teeth their nutritive pabulum.

It is a matter as yet open for inquiry, how far some other common poisons introduced into the body may exert an influence on the nutrition of the tooth. I have heard of *iodine* producing injurious results this way, but can find no reliable data of the fact; and in such cases as the iodism produced by iodine have been observed by myself (to the best of my recollection in three cases), no injurious results to the teeth followed.

I saw a case once in which *oxalic acid* was taken in a poisonous quantity, but in which the patient recovered: in this case profuse salivation was a leading symptom, and at one time every tooth was loosened. During a portion of this period, as experiment proved, the saliva was taking its part in eliminating the poison, so that the teeth were constantly bathed in acidified saliva. Notwithstanding this, as recovery progressed, the teeth became again firm in their sockets, and appeared, when convalescence was complete, to have undergone no organic change.

The effects of *arsenic* taken in gradual doses into the system have not been, as yet, sufficiently investigated in relation to the teeth. It is known that this poison, acting through the system, produces ulceration of the mouth and of the gums, but this is all that has been ascertained.

Antimony, which in its systematic effects closely resembles arsenic, seems to leave both the teeth and their adjacent structures free from injury, At least, this is the result at which I have myself arrived, from observation of the effects of the poison, both in man and in inferior animals. In the course of the researches from which this deduction is drawn, eleven animals were kept under the influence of the poison for long periods.

In some examples, where antimony is carried to its extreme effects in the treatment of disease, a pustular affection extending over the whole of the body has been the result. I had the opportunity of seeing this extreme effect once produced in a case of acute pneumonia in the human subject. In this case the pustular eruption extended over the whole of the body to such extent that, in ignorance of the cause, small-pox might at first sight have been supposed present. The interior of the mouth was covered with the eruption, but the gums escaped altogether from purulent disorder, or ulceration.

The *alkalies*, when carried to excess, exert a very decided influence on the system at large, and indirectly on the teeth. The general symptoms produced by the alkalies are those of low fever, attended with fluidity of blood, convulsion, and comatose death. In their special influence on the teeth and adjacent structures, they produce sponginess of gums, disconnection of the tooth from its socket, and all the consequences, in so far as these organs are concerned, arising from the continued use of mercury. Carried far enough, all the caustic alkalies, viz: potash, soda, and ammonia, appear to have the same effect on the inferior animals; and it is interesting to know that a similar effect may be produced by them in man.

I have seen potash water administered to such persistent effect, that a state resembling ptyalism was the result, but the most notable illustration of the effect of alkaline bodies is the following case, recorded by the famous Dr. Huxham:

"I had once," says Dr. Huxham, "under my care a gentleman of fortune and family, who so habituated himself to the use of vast quantities of the volatile salt that ladies commonly smell to—carbonate of ammonia—that at length he would eat it, in a very astonishing manner, as other people eat sugared carroway-seeds, *with a vengeance*. The consequence was that he brought on a hectic fever, vast hæmorrhages from the intestines, nose, and gums, while every one of his teeth dropped out, and he could eat nothing solid. He wasted vastly in flesh, and his muscles became as soft and flabby as those of a new-born infant. He broke out all over his body in pustules. He was at last with great difficulty persuaded to leave off this pernicious custom. He rubbed on in a miserable manner for several months, but died tabid and and in the highest degree of a marasmus."

The constitutional effects produced by the long-continued use of *opium* remain to be more carefully studied in reference to its action as a poison on the masticatory organs. In confirmed opium eaters, the gums in which the teeth are firmly set have a shrunken and pale character: the teeth themselves presenting little indication of disease. This observation relates to adults who are given to the practice of taking opium in large quantities, and one might infer from this that opium does not affect specially the dental structures; but I am inclined to think that among the children of the poor who are drugged with opium, not only is the second dentition seriously impeded, but the temporary teeth are small and dark, deficient in enamel, and very liable to caries.

* * * * * * *

To sum up—

The following are the propositions which I would respectfully submit as expressing in a few words the relationships which exist between constitutional causes and dental diseases:

1. Dental diseases of whatever kind have two sources; a simple local source, and a constitutional source.

2. The diseases of the organs of mastication, arising purely

from local causes, are limited in number; including caries, necrosis, inflammation or its upshot, and the ache, consequent upon exposure of nerve.

3. Every form of tooth disease may directly or indirectly originate in constitutional disorder, and some originate in no other ways.

4. In all such cases the true cause of the disease is external, and the system is merely the medium by which the cause passes, or through which it is carried to the locally diseased structure.

5. The causes acting on the teeth to produce diseases through the system, are of two kinds—chemical, as by introduction of poison into the body—and physiological, as by perversion of normal acts.

6. The inorganic poisons which through the system seem mostly to affect the teeth and adjacent parts, are the mercury, the alkalies, and, perhaps, the malaria; the organic are the poisons of syphilis and small-pox.

7. *Mercury* produces caries, suppuartion, and hæmorrhage from the gums; *syphilis*, atrophy, and tendency to caries; *small-pox*, suppuration, alveolar exfoliation and dental necrosis, and *malarial poison* intermittent tooth neuralgia.

8. Among the diatheses or dispositions of body affecting the teeth, the strumous, the dyspeptic, the gouty, the rheumatic, the cancerous, and the hæmorrhagic, are the most important.

9. The *strumous* diathesis, while it favors the development of all diseases of degenerative type, is not *per se*—*i. e.*, like syphilis or small-pox—a constitutional cause of dental disease. *Simple dyspepsia* is not a true constitutional cause. *Gout* is a true constitutional cause, leading both to acute ache and organic mischief; and *rheumatism* is a constitutional cause, giving rise to a specific rheumatic neuralgia of the tooth nerve and to a specific periostitis.

That there may be other forms of constitutional disorder arising from external causes, by which dental diseases are originated and intensified, is possible and probable. But modern science, carefully read, yields at present no more than I have in adequately marked out, except one, which has been intentionally omitted.

The *hæmorrhagic diathesis* as a constitutional malady, comes strictly under our present head. But this condition being one of peculiar import, must, as the novelists have it, be considered in a chapter of its own.

EXTRACTS FROM THE RECORDS OF THE BOSTON SOCIETY FOR MEDICAL IMPROVEMENT.

BY F. E. OLIVER, M. D., SECRETARY.

APRIL 11th.—*Malignant Disease of the Upper Maxillary Bone.* Dr. J. MASON WARREN reported this and the three following cases:

"In February, 1857, I was called to see a lady, about 65 years of age, affected with a malignant tumor of the upper maxillary bone. Her account of the origin of it was this: About a year previous, as she was attempting with a hammer to draw out a nail from the wall, the hammer slipped, and she received a blow from the handle of it on her face, just under the left infra-orbitar foramen. A great deal of inflammation followed the blow, with pain and constitutional symptoms, which continued five or six weeks. The inflammation having subsided, she felt a constant degree of tension in her face. The alveolar processes seemed gradually to expand, the gums assumed a fungous appearance, and the teeth on that side either dropped out, or were extracted by the fingers. At this time an elastic tumor showed itself in the mouth, which finally burst, and when I first saw her a gangrenous mass projected from the opening. The patient had a very quick pulse, her appetite was extremely small, if not entirely lost, and she seemed to her friends in a rapidly failing state. I immediately proceeded to clear away the slough from the mouth, which was fortunately effected without any hemorrhage, and gave her a wash, with the object of destroying the putrid emanations from the wound. Quinine and wine were administered, and very soon her appetite was sufficiently restored to take nourishing food.

"In the course of about three weeks her health was so much improved that it was thought expedient to bring into question what surgical procedure, if any, could be adopted for the removal of the tumor. The pain still continued at times to be excessive, extending over the face, and was of what is called a neuralgic character.

"Having requested Drs. Townsend and Cabot to see the patient in consultation, we agreed that the tumor was of a malignant nature; but as it was still limited to one of the maxillary bones, and had not yet implicated the surrounding parts, while the pain was so severe as to require some active surgical interference, we decided, notwithstanding the danger of a recurrence, that it was proper to advise an operation. The patient was disposed at first to accede to our advice, having the nature of the case fairly laid before her, but after a day's consideration and conversation with her friends, she said that if I thought there was the slightest danger of a recurrence, she was unwilling to submit to it.

"The subsequent history of the case is as follows: The tumor gradually crept along the floor of the mouth, invading the opposite maxillary bone. Projecting into the mouth, it opened at numerous points, obstructing the passage to the fauces, and almost poisoned the patient with foul secretions. The pain, during all this time, in the superior maxillary nerve, was excessive, requiring the most powerful internal and external medicines. It may perhaps be well to mention the following occurrence as instructive:

"During one of her violent paroxisms of pain, she requested an attendant to give her a teaspoonful of medicine from a phial supposed to contain a solution of morphine. By mistake, a teaspoonful of a strong solution of aconite, only used for external application, was administered; and the attendant, not being satisfied with its effects, very shortly administered a second dose. The aconite very soon began to show its specific effects, and the mistake was discovered. Dr. J. F. W. Lane, who had formerly attended the family, and who lived in the vicinity, was called. Dr. Lane at once administered a very stimulating emetic, and, following this by other very active measures, after a number of hours was able to leave her in a safe condition. The effects of the aconite on the brain showed themselves for a week or ten days afterward.

"This patient died in a very suffering state about six months after I first saw her, the end being finally accelerated by repeated hemorrhages from the sloughing mass."

Removal of the Upper Maxillary Bone.—"In the summer of 1857, I was requested by Dr. Reynolds to visit with him, in consultation, a patient who was suffering from an affection of the left upper jaw-bone. Some months previously, the trouble had commenced by an irritation in the neighborhood of the left lachrymal passage, which produced an obstruction in the passage, and a discharge of tears over the face. This was followed by a distended feeling in the upper maxillary bone, which gradually increased, and finally terminated by the appearance of an aperture in the alveolar process of one of the molar teeth, which discharged a quantity of blood and gave relief to the patient.

"When I first saw her, there was the appearance in the left nostril of a polypoid tumor, and she had suffered from one or two bleedings from this situation. After carefully investigating the previous symptoms, a probe was passed into the opening in the mouth, which penetrated deep into the maxillary sinus, and was followed by a free discharge of blood. The patient being rather low in health, and proposing to make a visit to her friends in Maine, I provided her with instructions, and she agreed to see me again in three or four weeks.

"At the expiration of the time appointed, she returned to Boston, and I found that the treatment had produced a decided improvement in her general health. The tumor in the nostril had increased, as well as the distension about the maxillary sinus, and she had suffered from one or two pretty severe hemorrhages. In the course of the following week, a bleeding of so severe a nature took place as to render it necessary to have some active surgical procedure at once adopted.

"Before making up my decision, I passed a finger into the nostril, which disclosed a large opening into the maxillary sinus, from which the tumor into the nose seemed to have projected. The jaw in the neighborhood of the aperture in the mouth had, since the last examination three weeks before, been more or less forced downward into a rounded elastic tumor. These circumstances being considered, seemed to leave but little doubt that the maxillary sinus was occupied by a tumor, which was gradually forcing itself out from the bony cavity in which it had originated. I advised, therefore, the extirpation of the superior maxillary bone as the only means likely to eradicate the disease, to which she at once consented. Having no accommodations in the hotel where she was staying, for an operation of such importance, she took a private room at the Hospital, where the following operation was performed:

"The patient, sitting in a chair with her head supported, was moderately etherized with sulphuric ether. An incision was made, commencing near the external angle of the eye, and terminating at the angle of the mouth; the cheek was then rapidly dissected up. The bone having now been made clear from the soft parts, the sponge, well-charged with ether, was again placed over the face, the flap being held up by an assistant. This served to etherize the patient by a second dose, and at the same time by its rapid evaporation to stop the effusion of blood from the small vessels, so that no blood penetrated the patient's mouth or fauces. The maxillary bone was now sawn through at the external part of the orbit, and the malar bone divided by the cutting forceps, as well as the nasal process of the maxillary. A large pair of Liston's forceps, double the size of those in ordinary use, which was made for me under the direction of that distinguished surgeon, was passed into the mouth and nostril, and divided the bone with as much ease as if cutting a piece of paper. A sharp-pointed knife was now drawn across the palate, opposite the suture of the palatine and maxillary bones, and the mucous membrane covering the palate cut through. The jaw was seized by a strong pair of double-hooked forceps, and the whole mass depressed, the superior maxillary nerve, as it passed along the floor of the orbit, being cut off. The remaining soft parts were next divided by curved scissors, and the operation terminated, the os palati, with the soft palate of the same side, not being interfered with. The whole operation lasted about ten minutes. The hemorrhage was not excessive, and the vessels were easily secured. The edges of the wound were at once approximated by sutures, and a bit of lint moistened with cold water laid over the surface.

"No lint, bits of sponge, or other substances, as recommended by some of the French surgeons for filling up the cavity made by the removal of the jaw, were used in this or the other cases in which I have done this operation. Whenever I have seen them used, they have been the source of much irritation, have been with difficulty removed, and the cause of a most offensive odor from the retention of the foul secretions in the mouth.

"The only fact worthy of mention in the subsequent history of the case, was the occurrence, at the end of about a week, of a hemorrhage from the interior of the wound, which, although it gave rise to some alarm to the patient, was easily arrested by careful plugging with a sponge. She recovered fully and entirely, and now, at the end of nearly two years, I have heard of her in the enjoyment of good health. The eye suffered no injury from the operation.

"The tumor was of a fibrous character, and was completely bounded by its capsule. In its expansion it had at first nearly obliterated the lachrymal passage, next it had produced an absorption of the bone in the vicinity of the nostril, forcing its way through into that cavity, and finally it was making its way downward through the bone into the back part of the mouth.

"The operation was as effectual and satisfactory in its results as any one of this description that I have ever done or witnessed."

Removal of the Upper Maxillary Bone.—"Mrs. G., aged 49 years, applied to me in September, 1857, for a tumor of the left upper jaw-bone. She was a small thin woman, of a delicate constitution, and somewhat sallow complexion. Her health was moderately good with the exception of a tendency to rheumatism, having three times had rheumatic fever. She knew of no disposition to hereditary cancer. She was the mother of several children.

"Three years previously she perceived a fullness in the cheek-bone, and at the same time there was a slight and constant discharge from the nostril of the same side. This discharge continued and the swelling gradually increased until July of the present year, when she suffered so much uneasiness from it, that her physician punctured the antrum after having extracted a tooth. This, at the time, was followed by a small discharge of blood; but three days afterward a copious discharge of pus, as she says, took place, which has continued since in varying quantities. When the discharge is small, there is much fullness and pressure about the antrum, which is relieved by an increase of the flow.

"When I first saw this patient, the whole upper jaw-bone seemed to be enlarged. The tumor had not made its way out into the mouth, but seemed disposed to do so into the cheek, the integuments of which were somewhat reddened and a little œdematous. I advised the patient to an operation, informing the friends of the probable nature of the disease and likelihood of a recurrence, but at the same time that an operation offered the only chance for her relief; that the disease would soon come to an open ulcer on the face, and she would die a lingering, painful and disgusting death; that the operation, though a very formidable one in appearance, was not actually so dangerous as many of the important operations, which were done to save life, and that the pain could be completely prevented. After this representation she at once consented.

"The operation was performed in almost precisely the same manner as the one just before detailed, the palatine bone and palate being preserved. In depressing the bone after its attachment had been divided, a portion at its posterior part was found adherent, and was left attached to the pterygoid process so as afterward to require removal by the chisel. This circumstance I have once, or twice, seen happen in removal of the superior maxillary bone, the natural adhesion of the part being almost increased to anchylosis by the inflammatory action, which had been going on in its neighborhood. It is of so frequent occurrence, that it might be well in every case, as recommended by Dr. J. C. Warren, to pass a chisel behind the bone, and loosen it by two or three blows of the mallet.

"This patient had a very good recovery, and returned home about three weeks after the operation, in good health and spirits. She continued well for a time, but has, I believe, since had a return of the disease."

Excision of the Upper Jaw.—"April, 1859. Mrs. N. M., a small thin woman, 44 years of age, and mother of seven children, with no hereditary taint that she was aware of, had always enjoyed good health till five months ago, when a few weeks before the birth of her last child, which is now four months old, she was seized with a pretty sharp pain in the right upper maxillary bone. This troubled her more or less until the birth of the child, which was natural, and which she was able to nurse up to the time of her application to me for advice. About two months since, her face began to swell, and what was supposed to be a collection of matter took place between the upper lip and the alveolar process. This was punctured by a physician, but only blood issued at first, though she said there was, a few days after, a discharge of matter. Her face has continued to swell from that time, and now presents the following appearances:

"A tumor seems to have possession of nearly the whole of the upper jaw-bone. On the inside of the mouth, the palate is pressed down by it, and does not reach quite up to the median line. External to the alveolar process, the teeth having all dropped out, the tumor extends from the root of of the canine tooth as far back as the last molar. On the face, the swelling extends quite back to the ear, but the root of the zygomatic process can be felt on very firm pressure, as if part of the swelling might be owing to serous infiltration. The whole of the lower bony margin of the orbit is lost, and its place supplied by an irregular tumor. The pupil of the eye is turned upward, though by closing the other eye, and by an effort, the patient has the power of bringing it into proper position, the sight being somewhat enfeebled. No tumor is to be perceived in the nostril, though there is occasionally a bloody discharge from it. The skin over the whole of the tumor is movable, but somewhat tense and glossy. The digestive organs are in good order, and the pulse is not materially affected. Excessive pain in the swelling, of a bursting, insupportable character, together with a very rapid increase of the tumor, induced her to come to Boston for advice, though she was obliged to do so at the expense of giving up nursing her infant.

"The tumor appeared to me, without any doubt, of a malignant character, and was so considered by my colleagues at the Hospital. We advised an operation as a method of relief, although, from the very rapid increase of the disease, we could not think it offered much chance of a permanent cure. This being stated to the patient and her husband, she determined to have it done, as she could not longer support the suffering from the disease.

"The incisions are made a little different form those I have hitherto done, on account of the extension of the disease so far backward. The first incision commenced midway between the orbit and auditory passage, and extended in a semicircular form to the angle of the mouth, with a very broad backward sweep, instead of commencing, as in the other cases, just back of the orbitar process of the superior maxillary bone. All the incisions in the bone were made with Liston's large forceps, which cut through it with the greatest ease. Some difficulty was found in depressing the tumor, on account of the degeneration of the bone about the orbit, which would not allow a firm hold to be taken with the hooked forceps, so that it was necessary to seize and depress it with the fingers. After the removal of the tumor, it was found that some of the cancer had insinuated itslf into the pterygoid fossa; this was scooped out clean with the fingers, and a hot iron applied to the neighborhood. There was not much arterial bleeding, and but one artery required ligature, although in the course of the operation there was a universa.

venous hemorrhage from the tumor, as is often observed in cases of operation for malignant disease. The patient during the whole time was fully under the influence of ether, and blood was prevented from running down into the trachea by care, position and constant sponging of the fauces. A number of sutures were introduced, preparatory to closing the wound, which, however, was left open for two hours, exposed to the air, until all danger of bleeding had ceased, when the edges were nicely adjusted, and a compress wet with cold water laid over.

"I saw the patient in the afternoon, found her quite easy, relieved from the pain she had previously suffered, and able to swallow liquids, though with some difficulty. The eye regained its natural position as soon as the principal tumor had been taken from it, and she was altogether much more comfortable than could have been antitipated in a feeble person so soon after so severe an operation.

"No unpleasant symptoms followed the operation, the wound in the cheek healing by the first intention, and she was able to leave the Hospital, to return home, in a fortnight. A small abscess of the cheek required opening the day she left."—*Bost. Med. & Surg. Jour.*

GOLD.—Number V.

BY PROF. AUSTIN.

Before speaking of the various uses of Gold in its pure and in its alloyed condition, we propose to devote some space to the peculiar method of valuation, sanctioned by long usage among workers in this precious metal; but which will, most parbably, in time, yield to the greater convenience of the decimal system, now adopted in the mints of France and America. As yet, however, the fineness of American gold is much more familiarly known to dentists by its valuation in carats than in decimals, notwithstanding the superiority of the latter method.

The term *carat*, or *karat*, originally designated an Abyssinion bean. Being very uniform in size, and undergoing scarcely any loss by drying, they came to be used as the standard of weight, in Africa for gold and in India for diamonds. Each carat was divided into 4 grains, of which 74 are nearly equal to 72 grains troy. This system of carats and grains is still used in the valuation of diamonds. But in the case of gold, the term *carat* implies, not so much any actual weight, as a fractional division, of which 24 go to make a unit. *Twenty-four carats fine* expresses the unity of pure gold, and signifies, not the specific weight of any given mass, but only that, in the 24 imaginary parts into which it may be supposed to be divided, there is no alloy.

The gold assayer takes as his unit or *integer* 6 or 12 grains troy. This small quantity is most convenient for purposes of assay, and these particular numbers are used for convenience of calculation. This 6 or 12 grains is called by the English assayer an *assay pound* and is by him divided into 24 carats and each carat again into quarters and sixteenths. The assayer of silver takes 18 to 36 grains troy for his assay pound and divides it into 12 ounces, each ounce into 20 pennyweights and these again into half-pennyweights—making, for the silver assay pound 480 divisions or *reports* and for the gold assay pound 384 *reports.* On the Continent of Europe the division of the assay pound for gold is different from the English.

In the English mint the term carat expresses no given weight, but merely degrees of fineness of which 24 indicate, purity. The carat is subdivided into quarters and these again into eighths—making to each carat 32 parts, 768 of which represent pure gold.

These varying, complicated and arbitrary systems are the relict of an age which delighted in intricate and perplexing mysteries. They are gradually yielding before the scientific demand for uniform and universal formulæ. Instead of each trade having its own peculiar weights and measures, there must come to be one standard for all business and ultimately one for all the leading nations of the earth. Instead of one measure for cloth, another for length and a third for land; one measure for wine another for beer and another for grain; one weight for the apothecary and another for the grocer: one standard for France a second for England and a third for America, there will be one uniform standard for all, based upon the Decimal system—England has adopted it in her silver assay, America in her currency, France in her system of weights and measures, and partially in her currency: and there are now movements in agitation for a uniform basis upon which these three great nations may unite. But until this desirable end is consummated we shall continue to talk of gold in the old-fashioned way, and even while our mint reports the fineness of its coin at 900-thousandths, we find it more usual to reckon it at 21 6 carats.

For the dentist it is convenient and quite admissible to take the terms *carat* and *grain* as equivalent, since the one bears the same relation to the pennyweight that the other does to purity. Thus the pennyweight of gold that contains 24 grains of pure gold is 24 carats fine: and 18 carat gold has in each pennyweight 18 grains pure gold and 6 of alloy. We thus get rid of the arbitrary values and subdivisions of the old "carat" system, substituting the familiar value of the Troy system. The still more convenient decimal system represents the unit of purity by 1000. American coin contains 1-10th alloy and is represented by 908 under the decimal system, its carat value is 21.6. English coin contains 1-12*th* alloy; 916.6 is its decimal, and 22. its carat value. The following short table will give a comparative view of these three ways of estimating the proportion of gold in a given alloy—column *first* represents the fractional proportion of gold, column *second* the carat value, column *third* the decimal equivalent:

TABLE.

Fraction.	*Carat.*	*Decimal.*	*Fraction.*	*Carat.*	*Decimal.*
1-8th	3.	125.	5-8th	15.	625.
1-6th	4.	166.6	2-3rd	16.	666.6
1-5th	4.8	200.	3-4th	18.	750.
1-4th	6.	250.	4-5th	19.2	800.
1-3rd	8.	333.3	5-6th	20.	833.3
3-8th	9.	375.	7-8th	21.	875.
2-5th	9.6	400.	9-10th	21.6	900.
1-2lf	12.	500.	11-12th	22.	916.6
3-5th	14.4	600.			

Applying this table to the choice of gold plate for dental purposes, we may select anywhere between 18 carats, containing ¾ pure gold, or 750-1000ths and 21.6 carats, containing 9 10ths pure gold or 900-1000ths. Of the relative merits of different finenesses and the most suitable metal for alloy we shall speak subsequently.

I conclusion of the subject of carat valuation it remains to give some rules for finding—1st, how much alloy to add in order to reduce the gold to a given standard; 2dly, what will be its fineness after the addition of a given amount of alloy. All correct rules may be deduced from the following formula which we have given without entering into any explanation of the original equation from which they are derived. Representing the amount of alloy by A—the weight to be alloyed by G—the higher carat by C—the lower carat by c—then

$$(1)\ A = G \div \frac{c}{C - c}$$

that is, to reduce a given weight of gold from one carat to a lower:—*Subtract the lower carrat from the higher; divide the lower carat by the difference; with this quotient divide the weight of the gold and it will give the amount of alloy.*

$$(2)\ A = \frac{CG}{c}\ - G$$

that is—*multiply the weight of gold by its carat: divide by the carat to which it is to be reduced; subtract the weight of the gold and the remainder will be the weight of alloy required.*

Either rule is equally accurate, being both derived from the same original equation, and both are perfectly correct. The latter is an old rule; the former was first given by the writer, some years since, in the New York Recorder. It can be worked out more quickly than the first rule, in most cases. The following problems useful to the dentist are given in illustration of these rules—Reduce a double eagle (516 grs.—21.6 carats) to 20 carats; also to 18 carats. By the 1st rule 516 is to be divided by [c divided by C—c] which in the first case is 20 ÷ 1.6 = 12.5, in the second case it is 18 ÷ 3.6 = 5; giving 41.28 grains the alloy required for the 20 carat gold and 108.2 grains for the 18 carat. By the 2nd rule 516 × 21.5 = 11145.6 which divided by 20 = 557.28 from which take 5.16 and we have 41.28. Again 516 × 21.6 = 11145.6 which divided by 18 = 619.2 from which take 516 and we have 103.2; the working of the first sum may be shortened a little by multiplying by 24 and dividing by 5—and of the second sum still more by multiplying by 1.2 and dividing by 1; still the first rule will be found almost invariably the shortest. Reduce four sovereigns (490 grs.—22 carats) to 20 carats, also to 19 carats. 20 ÷ 2 = 10 the divisor for the first sum, and gives 49 grains for answer; 19 — 3 = 6.33 the divisor for the second sum, and gives 77.3. In this last sum both rules work equally well.

The gold coins of different countries vary in fineness. The majority are about 21.5 carats. A few are under 21. such as nearly all the South American coins, except the Brazilian moidore and half-Joe.

The Brazilian and Portuguese coins, Russian rouble and the Austrian and Belgian sovereign are all nearly, some exectly, 22 carats. The Italian onzia and sequin, the Russian Austrian and German ducat are over 23 carats and some of them almost perfect pure.

As the coins of the United States and England are those almost universally used by the Dentist we subjoin some more precise statements regarding them.

The Eagle coined prior to July 31, 1834, weighed 270 grains, and was 22 carats fine, containing 274.5 grains of gold (half and quarter eagle in proportion.) Since July, 1844, the standard fineness has been 900 thousandths or 21.6 carats; the eagle, weighing 258 grains (12 grains less) and containing 232 grains pure gold. (Double eagle and the gold dollar in the same proportion.)

The alloy used in the gold coin was formerly 3 parts copper, 1 part silver—that is in 1000 parts of coin, present standard, there was 600 pure gold, 75 copper, 25 silver—these coins are recognized by their yellow color; (the California coin containing *no* copper, is still yellower and very soft,) of late years the alloy used is 99 parts copper to 1 part silver, the latter being used chiefly to soften the color. These coins are distinguished by their reddish color and resemble more nearly the English sovereigns.

The pound sterling is represented by the coin called the *sovereign*, whose legal standard is eleven-twelfths (or 916⅜ thousands) fine, and at the rate of 46.78 pieces to a pound troy; equal to 123⅛ grains to each piece. The coinage of sovereigns commenced in 1816. Before that time the principal coin was the *guinea*, of one pound and one shilling, (21s) which was on the same legal basis and which ceased to be coined when the exact piece was introduced. Although the term *guinea* is still in familiar use there, the actual coin is seldom seen, and need not be further spoken of except to say that the pieces are so much and so irregularly worn that they can only be taken by weight, their average fineness being 915½. From 1816 to about 1851 the average fineness of sovereigns was 915½, with great regularity. Since that date the fineness has been more exactly conformed to the legal standard and is reported by us at 916½. The average weight of the older pieces 0.251 ounce, and the value $4,84.8; new pieces 0.256¾, or 123⅙ grains; value $4,86.3. There are also half-sovereign, and some double sovereign have been coined.

☞ We publish the circular of the Corresponding Secretary of the American Dental Convention. If any have failed to receive it direct, they are hereby notified and invited as below:

Augusta, Ga., June 1, 1859.

Dear Sir: "*The American Dental Convention*" will hold its Fifth Annual Session at Niagara Falls, commencing no Tuesday, the second day of August next, at 10 o'clock A. M. At this you are respectfully and cordially invited to be present.

As every faithful and TRUE DENTIST must feel a deep interest in the advancement of his profession, and an earnest desire that it shall stand second in rank to NONE of the learned professions, it is expected that each one will encourage every movement calculated to enlighten and improve the great body of "practicing dentists" throughout the country. And, believing that the various "Dental Societies," and especially the "*American Dental Convention*" will do much toward elevating the profession, and thereby prove a powerful auxilliary in attaining the desired object, it is hoped that you will cordially and earnestly coöperate with us.

Yours, Very Respectfully,
D. S. Chase, *Cor. Sec'y.*

Editorial.

THE MEETING AT NIAGARA.

The next meeting of the "American Dental Convention" will be a very important one, and it is to be hoped that it will be well attended. The place of meeting is central, between East and West, and is a most pleasant retreat from the burning sun of the South; there will, therefore, be less excuse for non-attendance than formerly. We do not see why the Niagara meeting may not be made more profitable than any preceeding one. It is true, the attractiveness of the place may lead some to seek pleasure rather than science, but we trust the majestic spirit of Niagara will suppress all disposition to trifle.

As to the formation of a delegated National Society, we have only to say that the idea, if properly carried out, is a good one. Such an organization is not at all incompatible with the continuance of the Convention, or, if it is, we are opposed to it, at the present time. The "call" is issued at such a late day, that we fear many local societies will find it impracticable to appoint delegates. At any rate, some of them must suffer the inconvenience of called meetings, or go unrepresented. If the representation is not general, it would only be generous to take the preliminary steps toward, but postpone a final organization for another year.

W.

TO CORRESPONDENTS AND CONTRIBUTORS.

We are pleased and desirous at all times to receive contributions from the pens of our professional brethren for the *Register*, upon subjects pertaining to dental science. Indeed, to the aid thus received, does the *Register* owe much, for its success, and the value that may be attached to it. As every reader of the *Register* very well knows, we do not require, nor even wish that any article shall be in harmony with our own views, to gain admission to its pages. We are glad to have every one promulgate his own views, when they are in accordance with common sense, or when there is a respectable portion of the profession entertaining the same opinion.

Now, while we do not care *what* our brethren write, while it comes within the range of these provisions, we are desirous that some regard be given to the literary character of the productions.

While there are in the dental profession some fine writers, there are some to whom this term can in no sense be applied. We occasionally receive articles for publication, from which it is impossible to gather the writer's ideas. Sometimes the language is badly put together ; in other instances, there is entirely too much language, a verbosity that covers up the ideas wholly, or so obscures them, that they can not be perfectly seen. We should always remember that language is only the vehicle of thoughts ; there should be a definite idea in every sentence.

Occasionally the orthography and punctuation are not of the most approved kind ; indeed, some do not pretend to punctuate at all, and request us to punctuate their composition. Well, we have tried to do so, sometimes ; but in future will not attempt it, unless the writer sends the ideas along with the composition. It is rather difficult to punctuate without a knowledge of the meaning of the writer. There is no excuse for bad orthography.

The most of our correspondents prepare their manuscript well, but some prepare it *otherwise*. This latter class will please send in their communications a month or two in advance of publication, that there may be ample time for re-writing. T.

THE AMERICAN JOURNAL.

The April number of this pioneer journal gives evidence that its "youth is renewed like the eagle's." Its original department is much more interesting than usual, and we are told by the editors that they have made definite arrangements with prominent dentists, by which this department will be fully sustained. We can testify from our own short experience, that they have adopted the only reliable mode of securing original matter of the kind and to the extent that the profession requires. We are glad to see this evidence of increased vitality; for, though we disapprove of some things which the *Journal* says and does, yet it has no more sincere well-wisher than its "annonymous friend." W.

AMALGAM WORK—DR. HUNTER.

Dr. Hunter's article in the present number of the *Register*, starts out by referring to some observations which we made editorially in the March and June numbers of the *Register*, upon amalgam work, as put up by Dr. Slayton. At the time the remarks were made in the March number, our knowledge of the work was very limited, and we spoke of the matter as it then presented itself. The object aimed at, and the appearance of the work was given, and our own views of the work at that time, predicated upon its appearance, and the claims set up for it. We at that time had no experience with the work, and could predicate no remarks upon that basis. At that time we did not give the name of the inventor, nor the mode of doing the work, because we did not think that either was important for that notice, and we were not fully posted in regard to that manner of doing the work; it was at that time confessedly imperfect. The whole aim of that editorial was to direct attention to, and excite a spirit of inquiry concerning the matter, and these objects were accomplished. Dr. Slayton had about as much to do with either of the notices as Dr. Hunter. We generally make our own remarks in regard to matters of the kind, without any special dictation, and give just the impressions we may have at the time; always standing in readiness to get out of a false position whenever we are so unfortunate as to be in one.

"The cunningly devised notice," for the immense benefit of the inventor, would hardly be seen without very acute vision.

VULCANITE BASE FOR TEETH.—DR. ROBERTS, N. Y.

Our readers have been familiar through our advertising columns, with this valuable invention, and they will be interested to learn, we doubt not, the position of affairs in regard to the matter, as it has elicited no little attention for some time past.

We have just learned from our correspondent in New York, that at the last term of the United States Circuit Court, held in that city, and just closed, that in a suit brought against Dr. Roberts, by the Goodyear interest, a motion was noticed for an injunction to restrain him from using, in the manufacture of plates for artificial teeth, Vulcanized Gutta Percha, and from selling such plates to others, when manufactured. But the defence made by Dr. Roberts, to such motion, was so complete, that the counsel of the Goodyear party abandoned his motion without argument.

As this matter is exciting not a little interest in our profession, we shall give in our next number, a copy of Goodyear's Patent of 1851, and his re-issue of 1858, that all may judge of the claims made in each.

THE TRIP TO NIAGARA.

Arrrangements are about being completed, by which the fare will be reduced very much —to probably half fare—from Cincinnati to Niagara, to all those going to the "American Dental Convention." All persons South and West of this, and indeed all who may come to Cincinnati can avail themselves of this arrangement. All persons coming and wishing to embrace this arrangement, will call upon John T. Toland, No. 38 West Fourth street, for all special information in regard to this arrangement.

It is expected now, that every body will go and take his wife. We hope the ladies of the profession will appreciate our labor on their behalf. T.

DENTAL DEPOT.—SUTTON G. RAYNOR.

By reference to the advertising sheet, it will be perceived that this enterprising firm, is doing business with its accustomed energy and ability. In the dental furnishing line, they manifest a disposition not to be excelled. Their aim is to furnish all articles in the dental line, of superior quality, and they accomplish it. This after all is the great thing with the dentist. His instruments and materials should be of the best quality obtainable ; the price paid is only a secondary consideration. In regard to prices this firm is as accommodating as any other. They are emphatically go-ahead men, and will not be excelled.

THE DRUGGIST.—We have before us " The Druggist," a monthly newspaper, published by C. S. Williams, 194 Walnut Street, Cincinnati. The first number was issued in April. It is for the benefit of the Druggists, and is,furnished at a merely nominal price.

Each number will contain at least eight pages of original and select matter. The markets will be revised every month. By such means the Druggists and Physicians, and all others in any way connected with the business, or interested in it will keep posted up. None such can well afford to be without it

A PROPOSITION.

The D. M. C. of the Ohio Dental College proposes to see to the safe delivery and transfer of all baggage, to and from all Railroads, Steamboats and Hotels, belonging to those Dentists who make Cincinnati their starting point for the coming Convention ; also when there, (in Convention,) to attend to their wants, the same manner he did when the Convention was in Cincinnati. In return for the above, all he asks is, that his fare be paid to and from Cincinnati, and Niagara Falls by the above dentists, which, from the number understood to be going, will be about 50 cts. each. All in favor of the above will say *I!!* and notify Dr. Taft of the fact before the 1st of August.

THE
DENTAL REGISTER OF THE WEST.

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Original Essays and Communcations.

DENTAL EDUCATION.

BY J. TAFT.

The basis of a good dental education, is a good general *literary* and *scientific* education; without this, comparatively little can be accomplished in any professional study. There are two considerations worthy of notice here: in order to pursue most efficiently any professional course, the mind should be thoroughly trained, and habituated to thorough investigation, and close reasoning. The mind should have such a prior course of training, as would enable it to comprehend, and act upon those subjects pertaining to professional study, with the least possible bias, and liability to err. In a literary education, the student may embrace wrong opinions, and yet no injury result to him therefrom; not so however in regard to scientific, and still less so in regard to professional education. An error in professional education is a matter of grave moment. There will be outcroppings from it, all along through the professional life, of one who has thus imbibed wrong notions; he will thus be liable to be led astray at important points—thrown off the track, upon which he must, at cost, right himself, or lie in chaotic ruins. The errors that a man may commit in a literary education, will for the most part be corrected, as he passes along through an active life. There is, for such an one, far more correcting agencies, than for the man of science or profession. Literary attainments are also valuable, in elaborating, and bringing more fully to view, the principles involved in science. Literary training should always be thorough whatever be its range. In extent it should be by no means circumscribed. There is almost universally, a greater deficiency in thoroughness than extent. It is not all important, that the dental student should be a Greek and Hebrew scholar, nor, in every sense, a thorough mathematician, though it would be better if he were, yet it *is* all important that he should be perfectly familiar with the literature of his own language, for this is to be one of the means of his professional attainments. At how great a disadvantage does the man labor in professional studies, who is ignorant of the derivation and definition of much of the language he is compelled to use. In order to make progress, the definition of every word should be clearly understood, so that every idea presented to the mind of the student, should be closely apprehended, at the first presentation ; the simple comprehension of a subject will by no means satisfy the true student; but the proposition or principles set forth, should find a verification, by his own reasoning, or by such facts as he may be able to call to his aid, which will in many instances make positive demonstrations. It is always humiliating to see a man receiving principles or theories, simply upon the declaration of another, and yet the ignorant man finds himself exactly in this position, he receives the great proportion of his ideas upon the mere simple assertion of others. The illiterate man is unable to comprehend the truths of science, because of the opacity of the medium through which they must pass to him, and from the inability of his untrained mind properly to receive, and efficiently to act on them. In these respects, and others that might be named, doos the untrained mind labor at a disadvantage, while engaged in scientific studies.

In any professional study, a thorough knowledge of the common sciences is almost indispensable. They may all be made auxiliary to any profession, and to the dental profession quite as much so as to any other. The study of science trains the mind, but more than this, it gives an acquaintance and familiarity with an extensive range of subjects, any one of which may be called to aid, when occasion requires; but how is this to be done by the student of a profession, unless he first makes the subject his own. It is not necessarily true, that when we become scientific, we are less practical, but the very opposite is true, under proper culture; the more scientific a man is, the more practical he becomes.

The man of science has maps, and charts, and compass, to aid him, even though he should enter upon an unexplored field; but especially when he assays to go, where others have gone before him, does the way become easy, and he is almost without effort borne along. By the aid of general science, the study of a speciality becomes easy and even a delight, but without, the way is dark, uncertain and laborious. Science is a light to professional men, all the way through.

In thus speaking of scientific and literary attainments, of course it is only the real attainments that are referred to, and not the superficial and ephemeral education possessed by so many—the mere routine knowledge obtained by "*going through the books.*" In almost all cases such an education, in any department, is worse than nothing at all, it certainly is, unless the possessor is aware of the fact and does not rely upon it, more than it will warrant. When a man has superficial attainments, and is disposed to rely upon them, he will find his course a rough and a hard one. The man of great attainments is always a great worker.

/ Other professions have set standards of literary and scientific attainments for those who would become their pupils.—This has been wholly disregarded by the dental profession, owing probably to a want of efficient organization in its ranks.

All who have taken a fancy to it, have entered it regardless of elementary training.

We are admonished by one cautious friend, that this is rather a delicate subject. Well, delicate or not, we have felt an hundred times like handling it without gloves. What! our profession cramped, throttled and stultified, and yet no one dare to speak of one of the great causes of the difficulty; shall our colleges receive students who cannot write a sentence of the English language correctly? such at least ought not to be the case.

I would suggest that our dental colleges, by a uniform course of action on this subject, could accomplish much; let them fix some point to which they will rigidly adhere. It may be best to fix the standard low, but the applicant should at least be able to speak and write his native language correctly, and understand the elements of some of the common useful sciences. There are many reasons why he who seeks to enter the dental profession, should possess literary and scientific attainments of a high order. First, the profession is in a stage of development, and it requires the proper kind of nourishment—men who are willing to work, with a view to the upbuilding and strengthening of a young profession—men with clear heads, willing hearts, and strong hands.

Again, there is a great diversity of subjects pertaining to dental study. Art and science both enter into it. The dentist must be both an artist and a scientifician. He should give attention to all the branches of medical education. He has also to study mechanics, and many of the manipulations pertaining thereto. He should also study the symmetry and beauty of the human face, in all its phases.

Some attainments are also necessary in order that the dentist may occupy a respectable position in his profession, and with other professions. Until within comparatively recent date, there was no recognition of the dentist, by any body, above that of a common tradesman or artizan. It is now, however, beginning to be otherwise; there are some men in the dental professsion, whose attainments and abilities, not only in their speciality, but in science generally, compels a recognition, both by the learned and the unlearned. There has been such a mass of ignorance in our profession, that the better part could not carry it along, but had to sink, for the time, with it; but there is a sloughing off, a separation being made, so that the good will more rapidly rise, and the bad with more velocity sink.

In the absence of true dental education, we generally find *assumption*, *arrogance*, *empyracism*, *incompetency*, and decadence in public estimation.

And beyond all the attainments referred to, the profession needs men of sterling integrity, high honor and moral honesty; men who have the skill and honesty to make good operations; and the integrity and firmness to charge what they are worth; men who are willing to meet and determined to conquer difficulties. All such will be received with open arms into the ranks of the dental profession.

ALVEOLAR HEMORRHAGE.

BY GEO. WATT.

THOUGH in ordinary cases the extraction of a tooth is followed by but a slight flow of blood, yet few practitioners have failed to witness cases in which the hemorrhage was quite annoying, if not dangerous.

Alveolar hemorrhage may be considered as *accidental* or *constitutional.* Without feeling under obligation to defend the propriety of the use of these terms, we will state that, when the hemorrhage is the result of an undue laceration or incision of the gum and its vessels, we call it accidental—when it results from a morbid state of the blood, or from a peculiar state of the constitution, (called the hemorrhagic diathesis,) we consider it constitutional.

In the treatment of accidental hemorrhage, the appropriate use of styptics and pressure will accomplish all that is desired.

Nature's process for arresting hemorrhage is, to close the bleeding vessels by coagulating the fibrin of the blood—by forming a *clot* in or around the mouth of the vessel. The clot thus formed is in many cases, not firm enough to resist the pressure of the blood, and, hence, the bleeding continues. Art steps in to assist, and, by *pressure*, retains the clot in its place, when, in most cases, it effectually plugs up the vessel. In a good constitution, except where a large vessel is divided, this combination of the powers of art and nature is able to arrest the bleeding. But when the divided vessel is large, the pressure of the blood breaks down (or tears up) the clot, and other means are necessary. And if the blood be abnormal, the clot, if formed at all, may be of so soft a texture that it will avail nothing, even when pressure is appropriately applied to support it.

The object in using styptics is to obtain a firmer clot than is produced by the spontaneous coagulation of the blood. All styptics act chemically. To exert a styptic influence, an agent must have an affinity for some component of the blood; and the compound formed by virtue of this affinity must be, to some extent, insoluble. The albumen and fibrin are the principal constituents of the blood concerned in the combination with styptic agents. Many substances which manifest a strong affinity for these substances have no styptic influence. For example, the caustic alkalies combine energetically with them, but form liquid compounds, and therefore, present no obstruction to the flow of blood.

It is important, then, in deciding the choice of styptic agents, to notice carefully the characteristics of the compounds formed, respectively, by their union with albumen and fibrin. To be better understood, let us suppose a set of experiments with tannin, nitrate of silver and albumen. The nitrate combines energetically with the albumen, forming a firm coagulum or clot; but this coagulum softens and dissolves in albumen. Hence, if more albumen be present than is sufficient to combine with and neutralize the nitrate, the clot can not remain solid and firm.

If, then, the nitrate be applied to a bleeding vessel, a coagulum is formed in its mouth; but the blood in the vessel (containing fresh albumen) gradually disolves its way through it. The arrest of hemorrhage by this agent is, therefore, but temporary. We are thus minute because many infer that, as the nitrate is a powerful escharotic, it is also a most reliable styptic.

On the other hand, if tannin (tannic acid) be applied the coagulum will be less extensive but more firm, while it is not soluble in albumen or any other ingredient of the blood.—Consequently the blood cannot *dissolve* its way through it, as in the former case; and, if it be judiciously supported by pressure, so that the blood cannot *break* through it, the result is an arrest of the bleeding.

Sulphate of copper, sulphate of zinc, acetate of lead, and kindred mineral astringents, also form compounds with albumen and fibrin which are soluble in an excess of albumen, and consequently, in fresh blood. Their styptic power is, therefore, but transient.

In February, 1858, Professor C. had an upper molar extracted, about 10 o'clock in the morning. The hemorrhage was slight at the time; but about 12 M. it became excessive. He applied successively, several of the mineral astringents, with but temporary success. At 8 P. M., I visited him, and found his attendants, by his direction, using the sulphate of copper and pressure, without any diminution of the flow of blood. I removed the application, washed out the mouth, applied a solution of tannin on a pledget of cotton, and confined it by pressure. The bleeding ceased immediately, and did not return. A number of similar cases might be reported, but this must suffice, as our present object is *illustration* not *confirmation.*

The sesqui chloride of iron is a more reliable styptic than tannin. It combines promptly with the albumen and fibrin of the blood as well as with the coats of the vessel; and the compound it forms with them is all that we can expect. In urgent cases we much prefer it to tannin.

The actual cautery (a hot iron) is not a disirable remedial agent in alveolar hemorrhage, nor is it as efficient as other means in our power.

In making pressure for the arrest of alveolar hemorrhage, some judgment is required. Filling the socket will not always answer the purpose. The margins of the gums escape the pressure when it is applied. and may continue to bleed.—It should, therefore, be applied so as to bring them toward each other. This is readily accomplished by cutting a piece of cork in the shape of a block letter V, and setting it astride the gum, after applying to it a fold of cotton, wool, or other soft substance. The closure of the mouth on the cork gives the required pressure; and the mouth should be kept closed by a bandage.

When the hemorrhage arises from constitutional causes, the constitution should be treated; and, when it is known that the patient is of a hemorrhagic diathesis, the treatment should generally precede the operation. If bowels are constipated, a saline cathartic will be advantageous, after which opium and acetate of lead should, generally, constitute the main reliance.

General principles must govern the practitioner in the use of these remedies. Of course, different cases will require different treatment.

If there be no opportunity to treat the constitution before the operation, it should be promptly treated afterward; and at the same time, local treatment should be diligently used. The intelligent operator will seldom have much difficulty, if he has an opportunity to treat the case promptly.

A SQUIB.

We are not an editor, but a dentist. We are also an individual, but we write ourself *we* because we have not yet attained our dental majority, and must, therefore, rest conented in our plurality. We hope. *Now*, we want to say something about "fang-filling," as it is termed, and in order that our conclusions may be well founded, we will first reconnoiter our premises. Ah! here they are, interrogatively stated in "the Register" for July—we copy. "When the nerves of teeth are destroyed, is it proper to fill the fang and crown, or the crown only?" Since we first saw that paragraph in print we have taken frequent opportunities for viewing it.—We like to look at it. We gaze and wonder. We wish to know the writer. Did a man write it? Who lived in 1853? What was then fashionable? "See how they run." Take care reader! But isn't it fascinating, eh? Is'nt it bewitching? Just to think that *sometimes*, in a very *difficult case,* say when the 'fang' is in the vicinity of the stomach, head-waters threatening to inundate the canal, the patient impatient, and one very tired, that then, in such case, *it may be* "proper to fill the crown only." Goodness! what a glorious possibility. There *is* then a doubt! Gentlemen of the jury, you will give yourselves the benefit of the doubt on the dicta of the crown judge, and bring the assembly to its "extreme end" by singing "There is no more work," after which the Doc's elegy!

We do most heartily wish that we had never seen this sentence in question, it so completely obtains us. We were getting along so steadily, and contentedly in the warm sunlight of reason, reflected from common sense, that we had wholly ignored the shady side of this matter, and should probably have remained in thoughtless ignorance until doomsday, had not this sermon on the "go it blind" system chanced to have met our eye. We don't yet understand the thing, don't believe that we can; but for that very reason think there must be something in it—mystery is so enchanting!

Do, somebody, come to our aid or we shall perish before the sphinx. How *can* it be "proper to fill the crown only"?—Why not fill the mouth permanently with gutta percha after thoroughly drenching the patient, and then trust to the Dame to carry on the economy, by endosmotic absorption? Is there not poetry in the idea of abhorrent nature embracing her old-time enemy, the vacuum, thus symbolizing the perfection of the W-hole? Sure the Millenium is at hand!

Seriously, at last, let us take a *simple demonstrable* view of the subject of filling teeth, the pulps of which have been destroyed.

A central incisor is carious and the pulp-cavity exposed. If the inclosed tissue still retains its vitality, an escharotic may be applied, which will destroy its sensibility, and reduce it to the level of inorganic matter. If the pulp shall have long ago died a natural death, and alveolar abscess have supervened, then the cavity will be found to be filled with inorganic matter as in the first case supposed. Now, what has a dentist to do? It seems to us that his ordinary experience joined with a little of the leaven, common-sense, *must* lead him to take out the corruptible and put in the incorruptible; to remove the carious dentine and the deadened pulp, and *fill the cavity from apex to base* with gold or its equivalent.

And the second is like unto the first, differing only in the preparatory treatment. The abscess is to be treated topically until there is no longer any discharge into the pulp-cavity, or through the process, when the tooth is to be filled as before.

We think this a plain statement of a plain case, embodying the whole subject and capable of practical demonstration in the manner above described; embracing cause, effect, and cure of the diseased condition. With theories, gaseous or galvanic, we at present have nothing to do.

We shall take occasion to refer again to this subject and treat it more in detail, since its importance seems abundantly to justify the attempt. W. S. H.

TREATMENT OF RECENTLY EXPOSED NERVES WITH NITRIC ACID—WITH CASES.

BY J. TAFT.

AT the meeting of the American Convention, in Cincinnati, in August last, the treatment of recently exposed nerves, with nitric acid, was first suggested in our hearing, if memory is correct, by Dr. Wright of Pittsburgh. The idea struck almost every one present, as somewhat novel in character. Dr. W. represented his success in this treatment as almost universal. Upon the representations made, I was induced to try it, and the result has been success beyond all anticipation.—The treatment seems to be well adapted where the nerve is exposed by excavation, or but recently exposed in any way. Patients having a good constitution, with strong vitality, and of good recuperative powers, would be preferable, though it may answer well, in cases of feeble vitality,

Wounding the pulp in excavation is a matter of no consequence, it is probably quite as well to be punctured, and a little blood taken from it.

After the cavity of decay is entirely excavated and ready for filling, it should be wiped out with cotton, then take a pine stick and dress it down till the end is about the same size as the orifice at which the pulp is exposed, then dip it into chemically pure nitric acid, then touch the pulp at the point of exposure, with the end of the stick thus charged, retain it there from one-third to a whole minute, when the pulp at the point of exposure will be found cauterized and blackened; the operation of filling may then at once be performed, ordinarily without any intervening subtance between the gold and cauterized part; this, however, in some cases would be indicated, especially if the pulp was exposed at comparatively a large orifice. Introducing the filling if properly performed, gives no pain.

The following cases pretty fairly represent the treatment and success of my practice in this particular.

Case 1st.—June 26th, 1859, Mrs. E. aged 24 years, strumous diathesis. Had several teeth filled. The left central superior incisor had a large cavity in the central proximal surface; after excavating the pulp was exposed at a small point; it was touched with a sharp instrument and bled slightly. The tooth had not ached, and the pulp was healthy. Touched it with nitric acid till the point of exposure was blackened, then dried out and filled as usual, without causing any pain, had no intervening substance.

Case 2nd.—Same patient, same time. The superior cuspid of the left side was largely decayed, on the anterior proximal surface. The cavity about two months before, had been *stuffed*, by one who did not know what to do with it, the pulp being slightly exposed, was very sensitive, and had been in that condition all the while since it was thus *stuffed*. Removed the loose gold from the cavity, and found decay going on rapidly, and the pulp exposed at a considerable orifice, and in quite an irritable condition, it bled freely at a touch. Cleaned and formed the cavity, touched the pulp at the point of exposure with nitric acid, till it was blackened, after which there was some pain, applied creosote for a few moments, by which the pain was wholly subdued: then filled the tooth in the usual manner without causing pain, used no intervening substance. This is the most unfavorable case in which I have employed the nitric acid treatment. Two days afterward saw the teeth, and they were doing well, not the slightest uneasiness had been experienced by the patient.

Case 3rd.—July 9th, 1859, Mrs. L., aged 22 years, feeble constitution. Had the first left superior bicuspid largely decayed on the anterior proximal surface. Pulp was exposed, but in a healthy condition. Excavated the cavity without wounding the pulp, touched it with nitric acid, and filled as usual, without pain.

June 12th.—Since this tooth was filled there has been some pain, of neuralgic character. The case is a doubtful one.

In many cases the application of the acid produces no pain whatever; in other a sharp twinge is experienced at first touch. In a healthy pulp, there is little or no pain, while those in a state of irritation, are usually somewhat painful under the application.

Selections.

CHEAP DENTISTRY AND ITS TENDENCIES.

BY PROF. JOHN R. ALLEN, N. Y.

There is a great tendency at the present age to cheapen every manufactured article. The manufacturer, in order to promote his own pecuniary interests, must sacrifice, in a greater or a less degree, the interests of his patrons, for he employs inferior materials with which he constructs his fabrics. He also bestows less labor upon them to diminish the expense, and forms them more rudely, which requires a less degree of talent and skill. Hence we have many products like the Frenchman's, whose razors were not made to shave with, but to sell, and the buyer as well as the article purchased is generally sold. The dental profession is also tinctured with the same mania, and there are those who study more how to cheapen and lessen the value of their operations, than to increase their utility by superior excellence.

This distructive policy can be tolerated better in almost any other sphere than in dental practice; for if cheap dentistry were to prevail, the tendency with the profession would be retrogressive. Science and art would be diverted from dentistry into other channels, for those who possess them would naturally seek more lucrative vocations.

The thorough education, the requisite amount of taste and talent, of art and science, which are necessary for a good practical dentist to possess, would yield him a better remuneration if employed in other branches of business; for it should be remembered that dental practice cannot be enlarged like that of a mechanic, a merchant, or a manufacturer, who can employ fifty, a hundred, or five hundred hands, while the operations of a dentist are limited to a few fingers; and yet those fingers, if skilled in manipulation, and directed by a competent mind, may do as much to ameliorate the condition of man as the mechanic or manufacturer, and justice would claim for him at least an equal reward.

Aside from charitable considerations, when dental services are rendered for a less sum than a fair compensation, they come under the head of cheap dentistry, which is considered synonymous with *poor* dentistry, and poor dentistry tends to create distrust and destroy public confidence, which would place dental surgery in comparative obscurity should it become universal. The cheap dentist is ever regarded as being below par in his profession by the community where he lives, for let him place ever so low an estimate upon his services, the public will *mark* him still lower, and he is looked upon according to the level which he seeks; and after he has once taken his position and announced his rank through the medium of the public press, he will find it extremely difficult to change his grade should he subsequently wish to do so, for his *cast* is *fixed* and stamped with his own seal.

It is not the *cheapest* but the *best* dentists who are sought for by the major part of those who require dental aid; and the price is a secondary consideration. They require our best services, for which they are willing to pay a fair compensation, unless they have been misled by those who underrate the value and importance of dental operations when skilfully performed.

No, rather than pull down dental practice by cheapening and rendering it less valuable, let us strive to enhance its value, by aiming at a still higher degree of perfection; for it is more honerable and more lucrative to occupy an elevated position in the profession, than a low, grovelling one, that will ever be looked down upon with distrust.

GOLD.—Number VI.

BY PROF. AUSTIN.

*Gold of absolute purity is used for comparatively few purposes. The best gold leaf, dentist's foil, solder for platina work, and the positive plate of an electro-gilding apparatus should be as pure as possible. The most of the gold leaf used in the arts contains a small proportion of alloy, the effects of which will be subsequently considered. Dentist's foil also usually contains some alloy, but the best manufacturers at present aim to give to their foil the highest attainable degree of purity. A small quantity of alloy, about six grains to the oz., aids materially in giving to the foil the property of non-adhesiveness, required for certain methods of operating. The opposite quality of adhesiveness, is most fully developed in the purest metal. But it is also true that this property of gold is very much under the control of the gold beater: since from the same ingot he can produce, at will, adhesive or non-adhesive foil. So small a proportion of alloy, (1-80) of silver or copper can scarcely do injury to the teeth or mouth; but it gives a liability to tarnish, which, if occurring on a surface in a contact with a thin shell of enamel, produces an unsightly discoloration. The writer has seen foil discolor in the mouth and even in the process of annealing, which was asserted by a perfectly honest manufacturer to be as absolutely pure as could be made. Whether there was in such cases some accidental unsuspected impurity, some minute speck of copper affecting the metal around it, and when hammered out spreading its effects over considerable surface; or whether the iron upon which the annealing process is conducted can in any way have an effect upon the foil —are questions which we suggest but cannot answer.

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* Eratum.—In last No. 46th page, 17 lines from the bottom, for 108.2 read 103.2.

Pure gold is used by dentists in a sponge-like form known as sponge-gold or crystal-gold. It is not in place here to enter at all into the relative merits of crystal gold and foil; both have their warm advocates. In the preparation of the sponge or crystal gold it is of the utmost importance that every trace of aqua regia and mecury, when one or both are used in the manufacture, should be removed. When this form of gold was first introduced this important cleansing process was imperfectly done; but subsequent improvements have quite removed this objection to its use.

The adhesive quality of gold leaf or foil is due to the highly developed cohesive attraction of the particles. This force is diminished by the presence of any alloy and also by exposure to the air after annealing, and is quite destroyed by the presence of moisture. Simple contact will inseperably unite two leaves of adhesive foil: but in uniting a number of layers together moderate pressure is requisite. A piece of gold carefully formed in this way, has the same physical characteristics as if it had been solidified by melting: its perfect cohesion throughout can be most severely tested by drawing it out into fine wire—an experiment which has often been sussessfully performed. In a similar manner two halves of a freshly cut lead bullet will firmly reunite upon pressure: two surfaces of recently prepared plate glass will frequently unite inseperably if placed for some time in contact. In two metals, iron and platina, this cohesive force is developed only at a very high temperature, and under heavy pressure. This well known quality of welding gives a greatly increased value to iron. To the analogous but less known property of gold has been given the name of *cold welding.*

The preparation of gold leaf forms a large business to itself, requiring a great deal of care and experience. Gold is by far the most laminable or malleable of metals. It may be made so thin that 367,500 leaves are required to make an inch in thickness. The same number of leaves of ordinary writing paper would form a column 100 feet high: in other word it would require 1200 leaves of such foil to make the thickness of a sheet of writing paper. A sheet of No. 4 dentists' foil would make from 25 to 30 such leaves. But it is only the purest gold that admits of such extreme attenuation. Practically it is not carried so far, because the leaves would be too thin for convenient handling and a little alloy is added; 290,000 to the inch is the usual thickness. Some gold beaters will tell you that they must necessarily use pure gold, because any alloy lessens its maleability. This is true since silver, second in this respect to gold, can be hammered only as thin as the 10,000th part of an inch. But there are few gold beaters who do not use from 6 to 16 grains alloy to the ounce. This amount will prevent troublesome adhesion of the leaves to one another, and thus far it is very useful, and also allows the leaf to be reduced to the standard thinness used in the arts. Undoubtedly it gives to the leaf some liability to tarnish; but the gold leaf used in the arts which changes color so rapidly will be found still more highly alloyed. This is a fraudulent practice, done for the sake of economy, each grain of alloy saving to the manufacturer between four and five cents.

Any desired shade, within certain limits, may be given the leaf. The red color is given by copper, from 12 to 16 grains per ounce: orange and lemon colors by 6 to 8 grains of copper mixed with from 12 to 20 grains of silver: greenish and white shades by silver alone, from 2 to 20 pennyweights.—Copper hardens and impairs the malleability of the gold much more than silver: and when either metal is present in large proportion, the addition of a very small quanty of the other, materially adds to this effect. For this reason, in red alloys with copper and in green and white alloy with silver, only one metal must be used.

The art of gold beating has been known and practiced for more than three thousand years. The Jews were familiar with it and the Egyptians had brought it to a high state of perfection: still it was about three times as thick as the leaf of modern times.

The gold, alloyed as required, or else pure, is melted at a higher temperature than is necessary for simple fusion, which gives it greater malleability, and cast into ingots 1½ inches long, ¾ inch wide and 3-16ths inch deep. Annealing in hot ashes removes the grease of the ingot mould, and also increases its malleability. The French workmen next forge out the ingot, hammering it down to one-sixth of an inch, with repeated annealings. But the English gold-beaters proceed at once to the process of *lamination* between rollers, which for this purpose require to run with great accuracy. An ounce of gold thus treated forms a riband some ten feet long, an inch and a half wide, and about 1-800th inch thick. This strip is rolled up and thoroughly annealed, then cut very exactly into pieces about an inch or an inch and a quarter square, weighing 6 or 7 grains. One hundred and sixty of these squares are next placed between the leaves of a *Cutch*, made of vellum, or of a very tough paper, manufactured expressly for the purpose.

The gold-beater's art is answerable for the loss of many a precious manuscript—parchments from which, in preparing them for the ignoble purpose of a cutch, were erased characters that to the student would have given them a value above all the gold ever placed between their leaves. Thoughts of great minds, lost records of noble deeds, important events in the world's history, all sacrificed to the "yellow god"—one instance out of a thousand showing how often we unconsciously sacrifice the greater to the lesser good. Modern art has quite recently made from paper a very remarkable artificial parchment by passing it through a sulphuric acid bath, the strength of which requires the nicest regulation. This will probably supersede the use of parchments, though it can not recall the valuable writings which, because of the superior quality of the material on which they were written, have been sacrificed.

The cutch has two strong cases of parchment drawn over it at right angles to each other, so that the sides of one cover the open ends of the other. It is then beaten with a 17 pound hammer upon a firmly placed block of marble. The package is frequently bent or rolled with the hands, to prevent the leaves adhering to the vellum, and is occasionally opened to shift the inner leaves to the outside, and *vice versa*, to equalize the force of the hammer. In about a half hour each of the inch square plates will be beaten out to four square inches. These are taken out, cut into inch square pieces, and placed between the leaves of another *tool* called a *shoder*, which is made of gold-beaters' skin.

Gold-beaters' skin is prepared from the cœcum of the ox. The membranes are well prepared in an alkaline solution. One membrane is then stretched in a frame and another laid upon it. The mucous surfaces being brought together, unite readily and firmly, thus giving to each skin a smooth serous surface on both sides. This double membrane is then treated with alum and some albuminous substance, then beaten between layers of paper to remove the grease, and afterwards preserved and dried. The details of the process are usually conducted with much secrecy. The English excel in the manufacture of this article, which requires great care and commands a high price. A package of skins is called a *mould*, containing in Europe 1,200 leaves, in England and America 850 leaves. An English mould, containing 850 double leaves, a little over five inches square, requires for its production the slaughter of 500 oxen. After several months' use the skins lose their flexibility, which is in a great measure restored, by placing between leaves of paper and moistening them with white wine; after being pressed for three or four hours, they are put between parchment leaves and beaten for a day, then rubbed with fine calcined plaster. Dampness is very injurious to them.

The *shoder* of skins, interleaved with the gold squares, is enclosed in a double parchment case, as was the cutch, and beaten about two hours with a ten or twelve-pound hammer. During this and the subsequent hammering, the packet must be repeatedly rolled in the hand, to loosen the gold and prevent its adhering to the skins.

The leaves are then removed and each one subdivided into four pieces, by means of two sharp-edged pieces of cane, set at right angles upon a small board: a steel knife is not fit to cut the leaf when very thin, because of its liability to adhere to the metal.

These squares are placed in another *shoder*, composed of the finest and most perfect skins, and beaten for four hours with a seven-pound hammer. This last process requires great dexterity, on the part of the workman, to secure uniformity in the now extremely attenuated leaf. Three beatings and two quarterings expand the gold nearly 200 times more than when in the form of a riband, one ounce in this state covering 100 square feet. It could be still further expanded to cover 160 square feet, but this would involve too much extra trouble in the process of beating, and the leaves would be very difficult to handle. The leaves are carefully removed with long delicate wooden pincers, flattened by the breath upon a leather cushion, and cut with a frame of sharp cane into squares of uniform size, then placed in small paper books, the leaves of which are rubbed with red ochre to prevent adhesion. Dentists' foil, not being so thin, is placed in books of white laid paper, larger in size than a gilder's book, and requiring no ochre. A guilder's book contains 25 leaves, while a book of foil for dental use contains $\frac{1}{8}$ or $\frac{1}{4}$ oz.—each sheet weighing from 4 to 10 grains, and sometimes as high as 20 grains. The properties of the foil or leaf are much affected by the manner of annealing. In fact, there are several nice points in the manufacture of dentists' foil and gilders' leaf, about which gold-beaters are not particularly communicative; for to their skill in some one or more of them they attribute the peculiar excellence of their own article.

The labor of gold-beating is arduous, and attempts have of late been made to supersede manual labor by machinery. Eventually the majority of the work may be thus done, but skilled hand work will always, we apprehend, be in demand for the best quality of gold leaf.

DEATH FROM CHLOROFORM.

On Tuesday last, another death from chloroform occurred at the Royal Opthalmic Hospital. The patient, a healthy looking girl of fifteen, was about to be operated on for strabismus. She inhaled the anæsthetic without any unusual symptoms, when she uttered a sudden and very peculiar shriek. After this, she soon became quite insensible; the speculum was introduced, and the operator commenced. The chloroform had been administered on a piece of folded linen, and the time and quantity consumed in the inhalation had both been about the average (neither had been measured.) Soon after the first snip with the scissors, the operator's attention was called to the lividity of the girl's countenance, and on the finger being applied to the wrist, she was found to be quite pulseless. Mr. Critchett had already forced open her mouth, and dragged the tongue forwards. Artificial respiration was at once commenced, and, without any intermission, was kept up for about an hour. For a long time sanguine hopes were entertained that she would recover, as slight gasping efforts at inspiration continued to occur at intervals. The pulse, however, never returned, and at length it became apparent that she was quite dead. Movements of of the nostrils, as if in the attempt to inspire, were apparent for at least half an hour after the pulse had ceased. A brandy enema was given almost immediately after the first symptoms occurred, and it was then found that the sphincter ani was quite relaxed. Mr. Critchett, Mr. Bowman, Mr. Hulke, and a large staff of assistants were present, and everything that was thought desirable in the way of treatment was effected with the utmost efficiency and promptitude. The following day a post mortem examination took place. Dr. Baden, who conducted it, informs us that the most noticeable lesion met with was the presence of air, in considerable quantity, in the right chambers of the heart. The left side of the heart was empty, but the right contained a small quantity of spumous and fluid blood, with probably not less than two ounces of gas. In the lungs were numerous spots of apoplectic extravasation, probably by the very efficient manner in which artificial respiration had been kept up. There was no organic disease in the body. The uterine organs showed that menstruation (for the first time) was just about to be established. —*Med. Times and Gaz., June* 4.

Two Cases of Death from Chloroform.—Two deaths have occurred from chloroform in the hospitals of Paris, in the hands of two surgeons, not less eminent for their knowledge than their prudence, and the precautions they are accustomed to employ in the administration of this agent. The first case was a man aged 44, strong and vigorous. It was proposed to reduce a luxation of the shoulder. From fifteen to twenty grammes of the anæsthetic were employed. The chloroformization followed its usual course: first *excitation*, then *relaxation*. The pulse continued calm, as well as the breathing; the expression of the countenance was not changed; nothing indicated an unfavorable result. Relaxation having been obtained, Ritchet proceeded with the reduction, having removed the chloroform from the patient. Suddenly, the reduction being accomplished, the pulse ceased on both sides; there were no longer præcordial palpitations, although respiration continued. This soon ceased; then Ritchet used artificial respiration. Three inspirations were obtained, but the patient succumbed, without any movements of the heart being reëstablished.

The second case was a girl, aged seven and a half years, in the service of M. Marjolin. Four grammes of chloroform were employed. It was employed as in the preceding case, in a bloodless operation—that for coxalgia (Bonnet's treatment.) The child submitted readily to the inhalations. The first attempt was followed by cries from the child, who endeavored to place its free hand on the distant hip. In a few seconds the anæsthetic sleep and relaxation were produced, although the anæsthesia was not profound, since but few manipulations had been made, when the cries and agitation were reëstablished. The surgeon ceased his operations, and suddenly the cries and muscular resistance ceased. Instinctively, and as if from a sad presentiment, Majorlin looked at the child. The physiognomy was strange; the head was turned towards the bolster; the countenance more highly colored than a few moments before; eyes fixed and half closed. The pulse and heart being examined, no pulsations were perceived; three or four inspirations, becoming weaker and weaker, then took place; all relief proved useless; death was certain. In these two cases the pulse and the heart ceased to furnish palpitations, although the respiration continued. There was no asphyxia, but a contrary effect in each case. In both, the countenance, at the moment of death, preserved its color;

and hence death did not take place from syncope. How, then, did the chloroform act? Was it by direct action on the heart and lungs, which were as if paralyzed by it? These questions have not as yet been settled.—*Jour. de Pharm., and Am. Med. Monthly.*

THE LUCIFER MATCH DISEASE, OR ROTTING OF THE JAW BONE.

One of those rare and singular, but hitherto singularly incurable cases of destruction of the lower maxillary bone, by means of fumes of phosphorus, is now in St. Bartholomew's Hospital, where, a few days ago, it was found necessary, as a last resource, to take away the entire jaw-bone completely dead. We have seen so many cases of this fell disorder in the hospitals of London, from time to time, nearly always admitted when they are beyond every means of cure, that we refer to this case rather with an indistinct hope that some ingenuity may be set at work out of doors, amongst our higher class of chemical and medical philosophers, such as those who gave us the safety lamp and vaccination, chloroform, and hints on arsenic in wall paperings, so that these hideous diseases of the lucifer-match manufactories may be prevented, or in default thereof, that the lucifer-match manufactories themselves might be abolished.

Mr. Lawrence, in commenting on this sad case to his class, said that he knew little or nothing of the real nature of the disease, but of the fact of the destruction of this bone, and this bone alone, by the fumes of phosphorus, there is no kind of doubt, as several cases, and all exactly alike, have come under the notice of him and the other surgeons of the hospital. Some of our other London surgeons are inclined to believe that the experiments recently made by M. Ollier on the growth of bone artificially, by the transplantation of the periosteum, may lead, or have led, to some further insight into the nature of this disease. Mr. Paget, we need scarcely say, had come to a similar conclusion from a study of the process of necrosis, and the functions of the periosteum in such cases.

Mr. Quekett has shown that by a special arrangement of rice paper or other thin tissues with lime water, he can imitate the function of what are physiologically termed "raphides," hitherto thought to be as impossible as imitating Haversian canals, cartilage cells, or cancelli; it seems, too, from the experiments of M. Ollier, that a flap of periosteum retaining its attachment by one of its extremities (the rest being lodged in the flesh or muscles) continues to give off bone, much as the rice paper acts, almost like certain vegetable membranes (a piece of onion, for instance,) in giving off raphides and oxalic acid crystals; nay, a strip of periosteum, it is now discovered, may be obtained from the tibia, long enough, according to M. Brown-Séquard, to wind round the bone, or to twist into a perfect corkscrew of bony matter through the muscles—even a new piece of such bone, which with the periosteum has been borrowed, will adhere almost like an epiphysis to the old bone.

So delicate are these processes and operations, that they must be "touched with a gentle hand, for there is a spirit" in the process of true generation that will not bear rough handling; they may be repeated with the periosteum of the same animal on almost every part of his frame, as the deposit of phosphate of lime in the cellular tissue of bone or of muscle goes on alike without any discrimination, so long as the same blood supplies the phosphorus. The periosteum of one animal, however, transplanted to the bones or muscles of another of the same or a different species, invariably dies, or loses its power of keeping up its own periosteal functions! We now come to the lucifer matches. On questioning a poor man, not long ago, at one of our hospitals, he told us that he was employed at Mile End, where all the chief factories of England are situated; his occupation all day was to sit over a pot of melting glue and other ingredients, and to cut sticks of phosphorus into bits the size of a pea, throwing them one by one into the glue. Surgeons all agree that it is through the contact of the phosphorus acid fumes, thus given off, reaching the periosteum of the jaw bones, where it is denuded by loose or absent teeth, that its normal condition of nourishing the bone is altered and finally destroyed. The disease begins in a set of miserable gum-boils, which are lanced, and the bone, with its periosteum, laid bare; the teeth all become loose and fall out, the demon of bad surgery keeping pace with the disease. The case operated on by Mr. Lawrence was of two years' duration, and on admission the poor man presented all the usual familiar marks of this horrible disease. the ordinary fistulous openings leading down to a rotting and diseased periosteum, and a jaw-bone as dead and dry as one might meet in a churchyard, for it is not at all like caries or necrosis.

In something like a dozen of these cases, of which we have now learned the details, the disease commenced quite insidiously, but in the manner just described—gum-boils, and the glue-pot, and loose teeth at first—yet such is the infatuation of these poor men at these works, that they still, at high wages, are content, with these gum-boils and loose teeth, to go on at the employment; too many of the poor fellows, in fact, were inclined to make light of such things. The process of nutrition of the bone, meanwhile, diminishes week by week; there is little or no pain, till the disease finally passes the point of recovery, the whole bone is literally stone dead, and acts as a foreign body would act; the jaw now swells to an enormous size; the health still suffers; cod-liver oil, tonics, &c., are prescribed, but the function of the periosteum, of depositing a special form of phosphate of lime, (according to Professor Graham, composed of two tribasic phosphates, one of these an *alkaline* phosphate,) has been destroyed by the new phosphorous acid fumes or combinations of the lucifer matches.

Mr. Lawrence, in referring to the perfectness of the process by which the regeneration of the living bone is usually brought about in cases of common necrosis—as remarked, too, by Mr. Paget, still, if possible, more complete in the lower invertebrate animals than in man himself,—could not help wondering at the total and incurable destruction of the jaw-bone that is worked by the acids of the lucifer-match process. In one case, indeed, we observed the surgeon, on a "taking-in" day, seeing the poor man for the first time and examining the swollen jaw, to pick out the entire bone with his fingers, to the entire dismay of the poor patient. It was as dead as a fossil, but as perfect; this has been seen more than once in the hospitals.

At Nuremberg, in Germany, we were told by Mr. Paget, the great centre in Continental Europe for the formation of "lucifers," this horrible disease is also very common, and has been very fatal; it is a disease not in any shape or at all likely to be seen in small towns; nor do we see why some legislative precaution should not be enforced, to banish it altogether from our hospitals. Of one thing there can be no doubt: that the poor men employed in such factories do not at all understand the danger they are exposed to, and some obvious prophylactic measures are systematically neglected. —*Medical Circular*, *May* 18.

A FEW IDEAS ON MECHANICAL DENTISTRY.

BY F. J. S. GORGAS, D. D. S.

SEVERAL articles that have appeared in the Journal of late, show, most conclusively, that practice as well as theory is absolutely necessary to attain to a high degree of skill in our profession.

Dividing our practice into operative and mechanical dentistry, we sometimes find practitioners who, though they excel in the former branch, altogether fail in the latter.

The cause of this with some is, that they attach but little importance to mechanical dentistry, when compared with operating.

This is a grave error, for if we fail to give satisfaction in one branch of what we profess to practice, our reputation suffers to the same degree almost as if we had failed in both.

Where our patients are the judges, apart from the observation and opinion of the dentist, I hesitate not in saying that success in the mechanical branch assists the practitioner more in regard to reputation than the same degree of success in operative dentistry.

A filling may be inserted, and provided that filling preserves the tooth, it is in the majority of cases, if not entirely forgotten, never spoken of to others, while an artificial denture, giving perfect satisfaction, will not only be at once observed by those already aware of the loss of the natural organs, but be frequently spoken of in the highest terms by the grateful patient.

I do not wish to detract from the praise which skill in either branch so justly merits, but merely to give mechanical dentistry its proper station. Mere mechanical skill, although highly necessary, is not all that is required to perfect one in this branch.

It requires not only an "educated hand," but an "educated eye," and good judgment. Where can we find a nicer task, or one that requires more judgment, than in restoring to the human face its former beauty and natural expression? This is beyond the reach of many, notwithstanding the amount of energy they expend to obtain it.

A knowledge of anatomy and physiology is necessary, which we rarely, if ever, find in the self-made dentist, showing how useful the complete dental education, as taught in our colleges, is to him who would rise above mediocrity.

A knowledge of chemistry is also very necessary in our laboratory. I have known practitioners to send gold to depots more than one hundred miles distant, to have certain alloys removed, which, owing to their ignorance of chemistry, they were unable to work. Of all professions, dentistry requires the possession of that great virtue, "patience," and the want of it is the cause of failing with some who are otherwise well qualified. The time spent in giving work a superior finish, is not lost, even in the most busy season.

As there is much complaint concerning the springing of plates, I wish to say a few words explaining my method of backing and soldering a set of teeth, not claiming it as something new, for I am well aware that many manipulate in the same manner, but merely to explain a method which, if followed out, will give success.

I first back or line my tooth with platina, rolled as thin as common letter paper, giving the backing the shape I wish it to have when finished, and turning up the base, which is left long for the purpose, about the sixteenth part of an inch, or as wide as I wish the backing to be thick at the base where it joins the plate.

After this is done, I place the tooth in position, and, with a burnisher, press down upon the plate the part of the platina backing that I have turned up, so as to obtain a perfect fit. Then I bend with plyers the points of the rivets together. I now insert the tooth in equal parts of plaster and asbestos; dry it slowly, and after it is well heated up, melt upon the platina backing, by means of the mouth blow-pipe, any scraps of gold I may have after trimming my plate in swaging up. This gives a backing of the same quality as the plate, and lessens the amount of solder necessary in the common method, as there are no rivets to solder.

We also have a backing tapering from the grinding surface of the tooth to the base, to which any shape can be given, and which adheres so firmly that the tooth must be broken in small pieces to detach it. If care is taken in heating up and allowing it to cool gradually, no accident is liable to happen. In soldering, I use a copper cup, shaped like an impression cup, in the sides and bottom of which are a number of small holes. This cup should be large enough to allow the investment (equal parts of plaster and asbestos in quantity, the asbestos ground fine in a mortar) to be from one-quarter to one-half an inch in thickness around the teeth, and from three-quarters to one inch deep under the plate. I first fill the cup half full of the investment, mixed rather thick, and taking up the set of teeth, fill in the concave surface of the alveolar ridge. I then place the set in cup upon the investment I have already put there, and fill in between the teeth and the side of the cup.

After I have backed my teeth, I commence heating up, by placing the piece in the oven of a stove, and allow it to remain three or four hours, after which I use a small charcoal hand furnace, and with a Lawson self-acting blow-pipe, heat it up to a high degree, using a mouth blow-pipe to flow the solder.

In heating up with the self-acting blow-pipe, I shift the flame from side to side, by rotating my furnace so as to have an equal degree of heat in all parts of the piece. I allow it to cool before taking it from the furnace.

NOTE.—The method of backing teeth with platina, as noticed above, was described many years ago in the Journal, by Mr. Wilson, of Edinburg.

Am. Journal.

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DR. LANKESTER ON FOOD.

It cannot be denied that the human body is influenced at least as powerfully by the food we take, as by the medicine which we more rarely and unwillingly swallow. A course of lectures on food, therefore, seems a most useful and important preliminary to a course on materia medica. This subject is, however, usually slurred over, or very imperfectly handled, by lecturers on materia medica. The natural result is, that the study of food is considerably neglected by medical men, while by the general laity it is almost wholly ignored. Dr. Lankester has long been a prominent and eloquent exponent of the chemical, economic and dietetic relations of food; and when the elevation of Dr. Lyon Playfair to the Chemical

Chair in the University of Edinburgh rendered vacant the office of Superintendent of the Animal Product and Food Collections at the South Kensington Museum, Dr. Lankester was named as an able successor in that office. With characteristic energy, he set himself to forward the active development of these most interesting collections, and has resolved to make them as fully available as may be for general instruction. By the permission of the Committee of the Council of Education, he has initiated a course of six lectures on Food, to be delivered in the Lecture Theatre, at South Kensington, on Monday evenings, the 2d, 9th, 16th, 23d and 30th of May, and 6th of June, at 8 o'clock, at merely a nominal fee. The object of the course will be to explain the nature and sources of human food; and, with this view, the chemical properties are demonstrated, and the natural history of plants yielding food described and illustrated. The first lecture has been delivered: the subject was Water. It is difficult for those who are not personally cognizant—as, however, so many are—of the admirable endowments which the lecturer possesses, to imagine the eloquence, the humor, the philosophic generalizations, and the occasional touches of gravity, which rendered this lecture as attractive to the audience as it was replete with sound views and valuable teachings. The subsequent lectures, including the doctrines of nutrition and animal heat, with an examination of all the botanical and biologic relations of starch and sugar, flesh-forming foods, alcoholic compounds, tea, coffee, and chocolate, will deal with subjects which might furnish ample material for a much fuller course. We commend these lectures, and the very interesting collections at South Kensington, alike to the notice of students and practitioners.—*London Lancet.*

ARTIFICIAL PRODUCTION OF BONE.

M. Ollier, a young and extremely ingenious surgeon of Lyons, has lately published several important papers on the preservation of the periosteum in resection of bone, and has related most interesting experiments to show how large a share the periosteum takes in the regeneration of osseous matter. M. Ollier is pursuing his valuable labors, and has lately presented the Academy of Sciences, through M. Valpeau, some preparations illustrating certain points in the generation of bone by the periosteum. Amongst them was a portion of periosteum taken from the leg of a cock, which membrane, having been transplanted into the crest of the same bird, has given rise to a pretty considerable quantity of bone. The same result was obtained by introducing under the skin, and in the inguinal region of a rabbit, a portion of periosteum taken from the radius of the same animal. M. Ollier also transplanted a piece of periosteum of one rabbit upon another animal of the same kind, and likewise from a rabbit upon a dog; all which experiments were successful. —*Ib.*

NEURALGIA FACIEI.

Communicated by **Samuel A. Parker**, Dentist to the Birmingham Dental Dispensary,

A case came under my notice some short time ago, the patient suffering from neuralgic pains of the face.

She consulted me respecting some artificial teeth, to fill up a considerable gap in the upper jaw.

Thinking the case instructive, and of some importance, I beg to transmit the particulars respecting it for publication in the pages of the *Quarterly Journal of Dental Science* :—

Jane ——, about twenty-six years of age, was sent to me for the purpose of having some artificial teeth made for the upper jaw.

Upon examination, I found a great number of stumps remaining, the gums painful and much inflamed, and the patient subject to violent pains in the head and temples, the pain at times being so intense that no rest could be obtained, day or night. She had been in the habit of taking a considerable quantity of medicine for two years to allay the pain, but without the slightest benefit.

My course of action was at once decided, and I recommended the immediate removal of all the stumps, as the only remedy, for a speedy cure.

To this she hesitated for some time; but at length consented to have two out to begin with; which two I removed on the 11th of September last. Two more were removed on the 14th and 16th, three on the 18th, and two on the 20th of the same month, making altogether eleven stumps.

On the 16th, she told me the pain was decidedly better, had taken no more medicine, and had passed good nights.

By the 20th the pain had entirely subsided, the gums had begun to resume their healthy appearance, and the patient altogether quite recovered. In about two months afterwards she came, requesting the artificial teeth, being very impatient to have them, on account of the gap made by the removal of the stumps. I took the model, and by the 24th of November fixed them in, she finding them, in a few days, a source of great comfort, both for mastication and articulation.

This is one of those cases liable to come frequently under the dentist's care, but more frequently under the care of the medical practitioner. The case just alluded to was under medical treatment for more than two years, and yet in a fortnight after the removal of the stumps a perfect cure was established. It is a well known fact, that until every remedy (excepting the right one) has been tried, the teeth are not suspected of being the cause of such pains.

The dentist is generally consulted as a last resource, when in point of fact he should have been the first.

I cannot conclude these remarks without quoting a few words from an admirable paper by Dr. Hardy, in the *American Journal of Dental Science*, for October, 1849. The paper related to the "Pathology of the Mouth," and in the sixth page he says—"It is known to every well-informed physician and dentist, that cases have occurred, and are recorded, where patients have, year after year, taken medicine of every kind, and from the hands of the greatest variety of physicians, and all without avail; that such patients have, further, by the advice of their medical attendants, gone in pursuit of health, and for the removal of their diseases, pronounced to to be beyond the reach of medical and surgical skill; have gone by the best medical advice for the cure of their several cases, to distant regions, crossing seas, scaling mountains, visiting springs, taking every variety of exercise, and every variety of diet, yet all of no avail—as they have severally returned home, with little or no improvement in their disease, which still exhibits the same character and unmanageableness as when they started on their tour.

"By some lucky or accidental suggestion, the *teeth* are suspected as the probable cause of the whole mischief, and with some degree of plausibility, as everything else had failed to give any relief.

"This suggestion is acted upon; skillful dentists are employed, and by correcting the diseased condition of the teeth and mouth, the before-incurable diseases often become readily curable, the general health speedily restored, and the whole of this wonderful change brought about, simply by the application of a little dental skill."—*Ib.*

FRACTURE OF THE LOWER JAW.

In this case there was unusual difficulty in maintaining the fragments in apposition, by any means or appliances in ordinary use, but in which accurate union was at length obtained by an apparatus made by Mr. Howard Hayward, dentist. This consisted of a silver plate, moulded so as to fit accurately upon the teeth, and taking hold of three or four teeth on each side of the fracture. From this plate two pieces of metal projected at the angles of the mouth, and were tied by string to a small piece of pasteboard placed under the chin. Thus was the immobility of the fracture secured, and the patient relieved from a condition of extreme distress, and enabled without pain to open and close his mouth for the purpose of taking food, and also to articulate with tolerable clearness.—*Ib.*

POISONING BY CHLOROFORM.

Letter from Dr. W. P. Bain to the Editor of the Lancet.

Sir:—The effects of chloroform by inhalation are well known, but those produced by swallowing it in large quantities are not so familiar to the profession; the following case may therefore prove interesting:

I was called at half past seven A. M., on the 27th of October, to visit Mrs. D———, who was stated to have been found insensible. I saw her immediately. She was in bed, lying on her right side, her head resting on her breast, the countenance of a death-like paleness, the mouth open, the eyelids half closed, the eyes turned up, the pupils very slightly contracted, and affected by light in the smallest perceptible degree; pulse 84, moderately full; breathing abdominal, without stertor; the surface of the body and extremities warm; total insensibility of every part. Some thin, yellowish looking fluid had apparently issued from her mouth, and which had a faint odor.

I was at a loss to say what was the precise cause of these symptoms, till, suspecting poison, I looked round the room and found a three-ounce bottle marked "chloroform," with about half a drachm remaining. It was evident this agent had been employed.

I immediately used the stomach-pump, injecting about a pint of warm water, which I had the satisfaction of finding was rejected, tinged with a considerable quantity of bile. Sinapisms were applied to the neck, chest, and feet. She continued perfectly insensible and motionless for many hours, with the exception that, at intervals of about a quarter of an hour, a convulsive motion would be seen in the throat, the mouth drawn down, and vomiting would take place with great difficulty; respiration being stopped for about thirty seconds, the lips and face becoming turgid and blue, till at length a prolonged and stertorous inspiration would be taken, and the breathing by degrees resume its former regularity. The intervals of these attacks became longer as time went on, till about 1 P. M., when the eyelids and hands moved slightly on the irritation of the eye, and the pulse had risen to 100.

On seeing her at 3 P. M., she was evidently more sensible; pulse 100; the forearm and fingers livid-looking, and inclined to be cold; feet warm; had been very sick, and thrown up a great quantity of bile. Six P. M.—Pulse 120; able to answer questions; great tenderness at epigastrium; fæces and urine had passed voluntarily, the latter in large quantity; the odor of chloroform very strong in the breath. Half past 10 P. M.—Pulse 160; skin warm; no headache; very thirsty, and still inclined to sleep. Says that in consequence of some domestic unpleasantness, she rose at 3 A. M., and poured out a wine-glassful of chloroform (which she had obtained from the apartment of a lodger) into a tumbler, added an equal quantity of water, and drank it off. She says that she put out the candle and laid down again in bed.

The narcotic effects of the poison having now passed off, my efforts were directed to mitigate, if possible, the inflammation of the stomach now set up by its corrosive action, but with very little effect; for in spite of the effervescing and iced drinks, counter-irritation, anodynes, &c., she suffered for a week under all the symptoms of acute gastritis, and died on the eighth day after taking the poison. I may state that thirty-six hours after taking it, the odor was still to be perceived in her breath, showing that the quantity must have been considerable. The attendant's evidence also showed that the quantity she mentioned having taken was the same they had noticed the day before as remaining in the bottle.

Post Mortem Examination forty hours after Death.—The body was much emaciated; skin of a yellowish green hue, except on the depending parts, which were much congested; the fingers and nails very dark; abdomen tympanitic; muscles of the natural color; the stomach and intestines distended with gas, but in natural position; liver pale and finely mottled. The surface of the stomach much congested, and it was much contracted about the middle portion, forming two distinct pouches; when opened, an escape of gas, possessing a very ammoniacal smell, took place; the internal coats were highly inflamed; the rugæ of the depending portion larger than usual, and very pulpy; the mucous and muscular coats for about a circle of two inches in diameter near the cardiac orifice were entirely eroded, the peritoneal only remaining, with very few vessels remaining on its surface. The surrounding parts, on the contrary, were deeply vascular. Ulceration had also taken place near the pylorus. The lungs, heart, and œsophagus were healthy. The right kidney was sacculated, the tubular portion being entirely absent; the left was larger than usual. No symptoms of renal disease had been noticed in her lifetime. The brain was not examined, intelligence having remained perfect to the last.

The chief points of interest in this case are: the quantity of chloroform taken, without causing speedy death; the long time (about twelve hours) of total insensibility; the permanence of odor in the breath; and the entire absence of head symptoms on the recovery from the quasi-intoxication. It is not improbable but that she would have recovered, had the chloroform not been taken on an empty stomach, undefended from its erosive action.

The suggestion here forces itself upon one's mind—Might not the anodyne properties of chloroform be safely elicited in the old way of administering remedies, by the mouth—say in the form of chloric ether, in small quantities, mixed in mucilage, every quarter of an hour, till the anæsthetic action is produced?

HEMORRHAGE AFTER THE EXTRACTION OF THREE MOLAR TEETH.

To the Editor of the London Lancet.

SIR—I was lately called to see a case of hemorrhage after extraction of teeth, the source of which was evidently the dental artery at the bottom of the sockets; and as it possesses some interest from the fact that at one time it threatened to be hazardous to the life of the patient, I beg to forward a few particulars of it for insertion in your Journal:

A fine, remarkably healthy-looking little girl, twelve years of age, and not at all nervously inclined, had three molar teeth extracted by a friend who holds a first-rate position in our profession. These were a molar in the lower jaw on the the right side, one on the left side, and one in the upper jaw on the left side, being the first permanent teeth. The extraction was accomplished at half-past two o'clock in the afternoon, and followed by arterial bleeding from the sockets of the two teeth from the left side, upper and lower jaw. This continued uninterruptedly till half-past nine o'clock, when I was sent for to see her. The source of the bleeding appeared to me to arise from the small dental artery at the bottom of the socket. The blood was of a bright scarlet color, and continued to flow without cessation. I removed all coagulation from the cavities of both these teeth, and plugged them with cotton-wool saturated with muriated tincture of iron and tannin, which had the effect of most completely controlling the bleeding. I staid an hour with the patient, and then left her without any recurrent hemorrhage. About two o'clock in the morning I was hurriedly sent for, as the bleeding had returned in the same teeth during the night. On my arrival I found the plugs had become disturbed, and were compressed into the sockets by the teeth, but in such a way as to be ineffectual in preventing bleeding. They were therefore removed and the cavities were a second time very firmly stopped with cotton-wool, saturated in the same fluid as before. This so effectually controlled the bleeding that there was no further appearance of it. A gentleman, however, remained with her till six o'clock, to see that no mischief should ensue; for, I may state, the amount of blood lost was very considerable, and had greatly alarmed the child's mother, particularly as she was her only daughter. The next day I prescribed a lotion to rinse the mouth out every quarter of an hour, consisting of alum half a drachm; tannin, ten grains; tincture of myrrh, half an ounce; camphor mixture, seven ounces and a half: and latterly I brushed her gums with a solution of sulphate of zinc, ten grains to an ounce of water; and to take a fourth part of a Seidlitz powder every three hours in four ounces of water. I may say she is now quite well.

I may observe that the teeth were skillfully removed by my friend, and it was necessary to do so, as they were much decayed; and I thought it proper to publish these few particulars, to show that sometimes very troublesome hemorrhage will follow the extraction of a tooth when the hemorrhagic diathesis prevails. The removal of a tooth has actually cost the life of the patient, but in that class of persons a mere scratch or a very slight wound will prove fatal.

I remain, sir, yours very obediently,

THOS. H. HARDING.

Park-square, Regent's Park, 1859.

(From The Chicago Medical Journal.)

STOMATITIS MATERNI.

BY DAVID PRINCE, M. D.

Dr. Brainard: *Dear Sir,*—I have been much interested in reading the article on Nursing Sore Mouth, by Dr. T. J. W. Pray, of Dover, N. H., published in the May number of the *Chicago Medical Journal.* Allow me to contribute a short note as mere hints or suggestions.

Dr. Pray thinks the disease to be aphthæ, and says (page 307): "We regard this disease as local in its nature,"

Turning to Hooper's Medical Dictionary, which happened to be lying upon my table, I find aphthæ defined as a disease which appears in small white ulcers upon the tongue, gums, and around the mouth and palate, resembling small particles of curdled milk. Turning to Watson's Practice (page 482, American edition, 1847): "Aphthæ consists in small, irregular, but usually roundish, white specks or batches, scattered over the tongue and lining membrane of the mouth and fauces, lips," etc. "They look like little drops of tallow or morsels of curd sprinkled over those parts; they project a little above the surrounding surfaces, and, in fact, they are mostly formed by elevated portions of the mucous epidermis, covering a small quantity of sordes or gelatinous fluid which seperates epidermis from the subjacent corium." This portraiture is very distinct and true to life. Any one who has seen a sore mouth in an infant must recognise the truth of the description at once. In this region the women usually call the disease *canker.*

Nursing sore mouth is endemic in and around Jacksonville, and I have frequently seen and treated it: but I have never seen it as aphthæ, according to the definition of Hooper and Watson, just quotod. As it has fallen under my observation, the predominant characteristic is *ulceration.* Any occurence of vesicles is so insignificant as not to attract attention. The general surface of the tongue and mouth is a little darker than usual, and the woman who has ever before had the disease, recognises its approach before any ulceration can be discovered. When the disease proceeds unchecked, these ulcers assumes various forms,—sound, ragged and cracked, or fissured. There is never a white crust which is made a part of the definition of aphthæ. The feeble are more often afflicted, but no condition of health seems to produce an exemption.

The treatment in this region among the physicians with whom I am acquainted, has come to be a settled and sure thing. It is very rarely the case that a nursing mother is required to wean her child on account of this affection, unless it has become obstinate by neglect, and the general health reduced by its irritation, and the attendant inability to take nourishment.

The favorite remedy is iodide of iron. The liquor ferri iodidi of the U. S. P. is combined with an equal quantity of compound syrup of sarsaparilla, for the more agreeable taste, and of this a common sized teaspoonful is directed to be taken three times a day. In nine cases out of ten this cures, whether before or after delivery. (The disease is an attendant of pregnancy as well as of lactation.)

The next remedy in favor is the chlorate of potash. A saturated solution is made, and it is used both as a local application and as an internal remedy. A tablespoonful of the solution may be held in the mouth for a few second and then swallowed, or if only a local application is intended, it can be thrown out of the mouth. This may be done from three to twelves times a day.

These two remedies may be used singly or in combination.

To make the matter short the disease does *not* correspond with the definition of aphthæ, and therefore should not be called by that name; and it cannot be a mere *local* disease, or it would not be so readily controlled by an internal remedy, as in the use of the iodide of iron.

Respectfully Yours, DAVID PRINCE.
JACKSONVILLE, ILL., May 24th, 1859.

(From the Dental News Letter.)

PLASTIC FILLING.

MESSRS. EDITORS:—You are aware that some three years since, I was engaged in a series of experiments with oxy-chloride of zinc. I think I promised you, under certain contingencies, I would furnish for the *News Letter* a history of my experiments. I now proceed to redeem my promise.

I was induced to experiment with zinc and its compounds by meeting with the following extract from "*The Chemist.*"

"This cement is a basic oxy-chloride of zinc; it is formed by moistening oxide of zinc with the liquid chloride of zinc, iron, manganese, nickel or cobalt. These chlorides may be replaced by chlorodic acid. The hardness of the cement is proportinate to the concentration of the chloride and the density of the oxide. Washed residues arising from the manufacture of white zinc are employed, or ordinary white zinc may be calcined to redness. Chloride of zinc, marking from 50 to 60 degrees of Baume's areometer, is used, and in order that the cement may set less quickly, about three per cent. of borax or sal ammoniac is dissolved in the oxide, or else the oxide is calcined after being moistened with water containing a little borax. The mastic or cement obtained by the combination of the above substances may be run into moulds like plaster; it is as hard as marble; cold moisture, and even boiling water, are without action upon it. It resists 576 degrees Fahrenheit, and even the most powerful acids attack it but very slowly. The new plastic matter is not expensive, and its cost may be still considerably diminished by mixing with the oxide of zinc, metallic, silicious, or calcareous matters, such as iron filings or borings, iron pyrites, blonde, emery, granite, marble, or any hard calcareous matters.—Soft matters, as chalk, etc., will not do. The highest and most varied colors may be given to the cement, which makes it suitable for tables and mosaic pavement of great hardness and beauty. It may also be used for making moulded objects of art, such as statutes, medallions, bas-reliefs, etc. It is also well suited for ceilings, and several good dentists of Paris have employed it successfully for several years for filling decayed teeth, and even for cementing the parts of a set of teeth."

I commenced operations with the common commercial oxide of zinc, and such liquid chloride of zinc as I could obtain at the druggists, but soon found them utterly worthless. I then tried calcining the oxide and after a great number of efforts, I succeeded in obtaining an article which, when mixed with a highly concentrated chloride of zinc, (prepared by myself,) would harden, without shrinking, into a very solid mass. By varying the process of calcination, I could at pleasure, produce an oxide that would harden in from half a minute to an hour or more. While plastic, it could with great ease, be introduced into the cavity of a tooth, and if it had been properly manipulated by the time the plug was smoothed and trimmed, it would be hard enough to be entirely uninjured by the fluids of the mouth. I pluged several teeth with it, and had one of my own filled with it. I could, with different metallic pigments, vary the color till it could not be distinguished from the substance of the tooth filled. After observing the appearance of the plug from day to day, and finding no appreciable change, I was delighted with the result of my experiments and was almost ready to issue circulars to the profession, announcing the discovery of a plastic material perfectly suited to the wants of dentists, for filling teeth. I also used it for making continuous gums on gold and silver plates, for which it seemed admirably adapted.

I think it is Horace who recommends that young authors should not publish their works until they shall have been written nine years. I remembered that; and, although it was very trying to me to defer reaping my harvest glory until time should prove the worth or worthlessness of my discovery, I nevertheless did manfully combat my thirst for fame, and waited till I found that my material did not make an enduring highway for that old traveler Time. I found it gradually disappearing under his heel; the durability of it varying very much in different mouths. In some cases, large plugs of it would disappear in six months or less. In my own mouth, although the plug is not large and has been in over three years, yet it is not half dissolved; but mine, I believe, is the most favorable case in all my experiments.

Although I regard my efforts to find a plastic, suitable for plugging teeth, as next thing to a total failure, (for its legitimate use in dentistry is reduced to an exceedingly narrow field,) yet I regard the oxy-chloride of zinc as peculiarly adapted to a great variety of useful purposes in the arts; and as a knowledge of it is extended, it will be more and more highly appreciated. It is to be hoped that the value of a properly prepared article in the art, may soon be more generally known. A FRIEND TO PROGRESS.

RECENT DENTAL PATENTS.

BASES FOR ARTIFICIAL TEETH—Geo. Dieffenbach, of New York, N. Y.: I claim the composition of matter, consisting of sulphate of alumina and other ingredients, substantially as described for the purpose as set forth.

PROCESS FOR COLORING ARTIFICIAL TEETH—Geo. Dieffenbach, of N. Y.: I claim developing the color of a cured or hardened composition, by the agency of solar light, when the coloring matter is incorpoated into the said composition, while in its plastic or uncured state, substantially as described.

Correspondence.

WARPING OF PLATES.

I know very well that this subject of "Warping of Plates" has been written about a great deal; still I think it is not exhausted yet. The following method, which is very simple, and easily tried, I find to work quite satisfactorily. After the teeth are arranged upon the plate, and fastened with wax in the usual way, I put on my investment in the following manner. Lay the case on a piece of paper, with the coronal ends of the teeth downward. Then take a piece of No. 15 wire, bend it so as to fit closely to the teeth, (almost touching them,) letting it extend back as far as the backside of the plate on each side: lay it on the paper, and then put on your investment, building it up around the teeth until it forms a rim as high as any portion of the plate; not letting it cover but very little plate, just enough to hold it in its place. Place another wire, like the first, near the base of the teeth. After the investment has hardened, turn it over and fasten the case on a piece of charcoal or pumice stone, with binding wire, and then fill up under the plate with asbestos. Heat up with a large flaring blaze of the blowpipe. You can heat up in a few minutes, without much danger of warping the plate, or cracking the teeth. The smaller the quantity of investment around the teeth, the better; sufficient to hold the teeth *in situ* is all that is necessary. I have not had a plate to warp so as to trouble me since I adopted this method.

As soon as the case is soldered, it should be placed on a board, or some charcoal, with the coronal ends of the teeth downward, so as to cool slowly and equally. I will let others explain the theory—I will simply state the fact.

Yours, truly, H. M. SHEERAR.

Wellsville, N. Y., July 12, 1859.

MESSRS. EDITORS:—I have read with much pleasure your first monthly issue—the July number of the *Register*—and desire to say that if you can fill each subsequent number with as entertaining and as useful matter as this contains, you will have accomplished more than I have been disposed to think was possible. I have entertained the opinion that a monthly dental periodical, of respectable size, could not be sustained, and chiefly because of a want of sufficient suitable matter; not but what there is an abundance of material—for no profession has made such rapid strides, and accomplished so much in a given time, as the dental profession. And where there are such advances, there must of necessity be much to communicate—but the materal remains unwrought, and therefore unavailable, which is all owing to that almost insurmountable obstacle, *indisposition* on the part of the great mass of the profession to put their thoughts, modes of practice, and experience, on paper. Therefore they do not contribute, and therefore the lack of matter. But, perhaps, the demand made upon them by the issue of your monthly—and the one recently announced in this city—may induce an effort, on the part of the profession generally, to sustain the enterprise by

Those writing who never wrote before,
And those who did, to write the more.

For the credit of the profession, I hope it may be so.

As the time approaches, there is some talk about the next meeting of the American Dental Convention. So far as I have been able to ascertain, there will be some twenty or more delegates (not counting the ladies,) from this city, many of whom will probably advocate the formation of a "National Society on a Representative basis."

I regret to see the opposition manifested by some of your contributors, as well as by a number of the profession in New York, to this project. They are, I think, premature in their opposition. I would have all such wait until it properly comes up for consideration, when it may assume a different and more pleasing phase than it now presents to them. One special, and I conceive important result, of such an organization, would be the formation of State and city associations, for it being established on a representative basis, would render necessary such associations to secure a representation, and this result alone, independent of its other advantages, should commend it, I think, to the support of the profession generally, for State and city associations, with their frequent meetings, are more productive of good, professionally and socially, than conventions or national societies ever can be. Still, these larger convocations have their office—they enlarge the intercourse and liberalize the mind, and thus increase the usefulness of those participating in them. Therefore I think that there cannot be too many of them.

A few days since, while in the neighborhood, I paid a visit to the grave of Elisha Townsend; and as I leaned upon the railing, a flood of recollections passed through my mind, running back to our first acquaintance, many years ago. How well I remember his desire to bring about a more kindly feeling among the dentists of this city at that day, and his willingness to impart whatever might advantage his professional brethren; then his subsequent public efforts and labors for the same object, with which all are familiar; but particularly did I remember and dwell upon his sociable, companionable qualities, as well as his professional excellence. Surely the usefulness of such a professional life as his cannot well be over-estimated. Allow me to give you one from many illustrations that might be mentioned. A dentist from a neighboring town, in no practice, called upon him to have a tooth filled. He did not disclose his profession, and with mirror in hand noticed the operation from beginning to end. On his return home, with the first patient that presented himself, he put in practice the method used in plugging his own tooth, and after five distinct efforts upon the cavity, he succeeded in filling it to his satisfaction. He remarked afterwards, when narrating the occurrence, that he dreamed of it that night, his mind being so engrossed, and that by repeated subsequent efforts, he was enabled to fill a tooth in a manner he never supposed possible, and that he had learned more in plugging teeth, from seeing his own tooth filled, than he had learned during his whole previous practice.

Dr. Flagg the elder has gone to Paris, chiefly for the benefit of his sight, which has become somewhat impaired. Professionally, there is nothing new. A large representation is looked for at Niagara. All the profession and their wives are likely to be there.

If agreeable to you, I may drop you an occasional letter.

Yours, O. U. C.

Philadelphia, July 13, 1859.

"Agreeable?" Most assuredly. Yes; desirable.

Editorial.

A NATIONAL SOCIETY.

Questions are frequently asked in regard to the formation of the contemplated National Dental Society. As to what the objects are, and what will be its appropriate work, and whether it can accomplish anything more than can be accomplished by the American Convention. In all that we might have to say in regard to the formation of such a society, we would not reflect for one moment, that the American Convention has not accomplished everything. Such a body is not competent for thorough scientific investigation. We conceive its object is accomplished in the following things. The social intercourse and interchange of views of all the members of the profession, so far as they may be able to attend, without any regard to the particular position occupied by any. And the discussion of practical points—this latter is exceedingly various in character, oftentimes.

All the members of the convention are upon an entire equality, so far as association, and the work to be accomplished is concerned. This is as it should be ; all the members have equal rights.

The less advanced employ much time, asking for information of those more advanced, or who are supposed to be so. Indeed the avowed object of the American Convention was to " level up" this of course is all important, and should not be neglected, but while this is going on, it is desirable that there should be an elevation of the whole profession. This cannot be accomplished by such a body as the American Convention, this fact has been recognized by many in the profession, and hence the move for the organization of the delegated society; the demand however for such a body as the American Convention, is now as imperative as at any former period; the members of the profession should know one another, the better acquainted and the more familiar they are with each other, the more ready will they be to co-operate in any enterprise having in view the promotion and advancement of dental science. But while we cannot well afford to be without an occasional meeting such as the American Convention, yet something is required, to accomplish a higher and more efficient work. We can well conceive somethings that can only be accomplished by such a body as the contemplated society; for instance the elaboration and development of the science of our profession.

This can never be done by such a body as the present; the contemplated society would bring into active play the best minds of the profession, and stimulate them to action upon the fundamental principles; these, all will admit have been by far too much neglected. But to specify more particularly, principles and subjects, that have hitherto remained hidden and undeveloped, would be assigned to the hands of a committee of one or more persons, whose business it should be, during the time designated for that purpose, to call to aid in the investigation of the subject, general science, so far as it may be applicable, and close scrutenizing investigation. Under such an appointment the committee would have the highest stimuli to action, the expectations of the whole profession, not only of this country but of the whole world, would be directed to the prospective results of such committee's labors. The responsibility of such committee would be great, and they would act in accordance with that responsibility.

The question is often asked will it be the province of the society to legislate, to make laws for the profession. It certainly will not, at least farther than to lay down rules of ethics and recommend them, leaving it to the enlightened judgment of the members of the profession whether they adopt them or not. Any such rules and regulations adopted, should so harmonize with reason and good sense, as to recommend themselves to the good judgment of all. We have precedents, that forbid the assumption of judicial and executive authority by such a body. It may be replied that all men will not be influenced to a right course, by reason and good sense; neither will such persons be compelled to do right, by any power which a profession might exercise over them. We look and very justly too, to the opinions and principles entertained by the older and more advanced members of the profession; these of course will have influence corresponding to the recognized ability and integrity of such persons. The centralization of power has been suggested as an objection to the prospective society, but the suggestion is without force, when we remember that this society is remoulded annually by the profession at large; so far as its membership is concerned, if a delegate prove recreant to his trust he can simply be laid aside.

Again it is said, that there is a large number of the profession, not in connection with any dental association, who could not be represented in such a society. This doubtless is so at present, but the difficulty would become rapidly less, as there would be a strong inducement for the formation of new societies, both local and state associations. And were there some, or even many who could not be represented, they would still derive much benefit from such a national society. The result of its proceedings would of course be enjoyed by all, who avail themselves of the ordinary mediums of professional communications.

The fact of forming a delegated association cannot do injustice to any one ; but must necessarially result in great good to all. The propriety of fully organizing such a society at this time, is doubted by many. This we think, however, will depend entirely upon circumstances. If there is a full representation from all the existing societies, and they generally entertain the opinion that such a society should be formed, and can act harmoniously in the organization, then let as much be done as possible. In the event of a failure, in any of these particulars, it would certainly not be best to press an organization immediately.

We have all confidence in the judgment and ability of the profession, that what is best will be done. T.

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THE DENTAL NEWS LETTER.

This valuable Journal from this henceforth, is no more. It closes with the July issue. It did not die, for it had too much vitality to die. Some say it has been *transmografied,* we dont believe it. It just simply "*went up the spout,*" *quit,* got out of the way, for the introduction of the "Cosmos" (Oh, what a name). There was not room in Philadelphia for the *News Letter* and the *Cosmos* too.

We insist upon it, that it is a mistake in taking the latter name, instead of the former ; the former has become a household name throughout the profession ; the latter name but few will know what it means, even after the explanation. This is a new Journal that is to arise instead of the *News Letter,* and is to be issued monthly instead of quarterly. This is decidedly a good move, though we feel a little *ticklish* about being *chased* so closely, especially by the "Cosmos." But come on. T.

MOOD.

Doubtless every operator is cognizant of the fact, that he is sometimes in a far better condition for operating on the teeth than at others. In filling teeth for instance, he sometimes feels that he can do almost any thing he desires, can perform any operation, almost, without reference to the difficulties that may be attached to it, that there is nothing too difficult for him. The bright side of everything comes first; the instruments are all right, the material is right and the patient is right, and he goes on and performs his operations with ease and facility.

Things do not always go thus smoothly, so far from it, that they get entirely to the opposite, nothing seems to work as it should.—The operator becomes irritable, and nothing seems to go right with him, so that he cannot fill a simple ordinary cavity, in a manner satisfactory to himself, the instruments are wrong, the gold is wrong and the patient is an unfavorable one, and the difficulty increases, till he either spoils his operations, or ceases his efforts. Almost every operator occasionally finds himself in this condition. We are occasionally attacked with it, and when so, if possible, postpone the operation. That state is brought on sometimes by physical indisposition, at other times by mental irritability, and by hurried or long continued labor. Whatever be the cause, the appropriate remedy should be applied, and no one who wishes to make good and reliable operations, should attempt to fill teeth, while under the influence of such a mood. T.

CHANGES.

We learn by the *News Letter*, just issued, that the firm of Jones, White & McCurdy is dissolved. J. R. McCurdy has withdrawn, and the business will be conducted by Jones & White as formerly. How strange; why we can scarcely realize that there is no McCurdy in that extensive establishment. Mc. has become known, and endeared himself to the profession, not only in the United States, but of the world. The profession is largely indebted to this firm for the great improvements in materials and instruments, which by the energy of its members, have been made during the last fifteen years. We feel somewhat reconciled when we remember the business remains in good hands, though it will doubtless add much to their labor.

Our Yankee *asks* where is Mc? and where will he be? how will we get to see him. He is one of the institutions we intend to see, as long as it is possible, when we go east.

In this change, we ourselves individually and personally are damaged—injured—yes, almost *busted.* Mc. has *gone up* as an editor, he has got down off of the *tripod,* and now if you will not get on again, please set on a *stool* occasionally, for our special benefit and try to look natural as you can. Do. T.

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WHO IS RIGHT.

By a card in the present issue of the "*New York Dental Journal*" it will be seen that Mr. Goodyear denies the statement, made in the last *Register,* upon the authority of our New York correspondent, in regard to the abandonment of the suit of Goodyear *vs* Roberts, for infringement of patent in regard to vulcanized Gutta Percha, by the former. These statements seem to be antipodes.—How is this gentlemen? T.

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MEDICAL AND LITERARY WEEKLY, Edited by *V. H. Taliaferro and A. G. Thomas,* Atlanta, Ga.—This is a new weekly paper devoted to medical science and literature. One aim of the editors seems to be to make such a paper as will be acceptable not only to the medical profession, but to the public generally; this they endeavor to accomplish in two ways. By simplifying and and popularizing medical subjects, presenting them in such language that they will be comprehended by all. And, by introducing such choice literary matter, as shall secure the attention and interest of the reading public. The first of these might possibly accomplish the object, if carried out, but the introducing of the latter makes it doubly sure. We have long entertained the idea that much might be done by simplifying and popularizing most, if not all the sciences, so that the leading fundamental principles involved in them, might be made perfectly familiar to the great majority of the people. Many of the sciences have been so covered up, and hidden by abstruse terms and technicalities that it is the work of half a life time, to dig out the principles that lie beneath them, and few are found willingly to undertake the work, unless they resolve to make it a life business. We hail with pleasure, the introduction of every such work as the above, and hope the effort will be fully rewarded. T.

* * *

CONSERVATORY JOURNAL, *Devoted to Establishing a Massachusetts Conservatory of Art, Science and Historical Relics.*—This is a new publication, issued at Boston, from which, judging from the numbers before us, much may be gathered pertaining to art and science. The chief object however seems to be the founding an institution that shall be an honor to our country, and one to which our people may resort for information not to be elsewhere obtained in our own country. Though to Massachusetts belongs the honor of inaugurating this enterprise, yet it should and will be national in its character for the present at least, hence all who feel an interest it should give it their aid and support. The *Conservatory Journal* is issued every other Saturday, at one dollar a year in advance, and we think a dollar could not be better employed than in the procurement of this Journal. T.

* * *

ERRATA.

In the last number of the *Register*, on page 419, second line from top insert *when* between that and there.

Same page, twenty-two lines from the top, and other places, read *Symes* instead of Lymes.

Page 420. nineteenth line for professedly read *confessedly.*

Page 421, fourteenth line for regular read *irregular.*

THE

DENTAL REGISTER OF THE WEST.

VOL. XIII.]　SEPTEMBER, 1859.　[No. 3.

Original Essays and Communications.

USE OF COLLODION IN EXPOSURE OF NERVES.

BY ABR. ROBERTSON.

At the meeting of the American Society of Dental Surgeons (that was) which was held in Philadelphia eight years ago, I communicated verbally, but very briefly, a method which I had then been using, under certain circumstances, in the treatment of exposed nerves, for about two years; a very meagre report of which was published at the time, in some of the journals, among the transactions of the meeting.

An experience now of about ten years in the same course of treatment, and with almost uniform success, induces me to speak of it, and to recommend it to the numerous readers of the Register with great confidence.

I have intimated above that it is only under certain, and I will now add, favorable circumstances that I regard the proposed treatment as applicable. For I believe that whenever the nerve is exposed, and has become inflamed, and especially if it is so much inflamed as to be painful, it had better be destroyed at once; and before reading your "Thoughts on fang-filling" in the last number of the Register, I should have said—their canals thoroughly cleaned out and filled to their points. But now, for myself, I shall try the *tanning* process and test your reasoning, and which certainly seems plausible. And I will further digress enough to say that I have frequently succeeded better, and to my surprise too, sometimes, in the filling of roots in very bad cases where I have deemed it necessary to adopt a preparative course of treatment similar to what you recommend, than I have in many other cases that seemed far more favorable and where I had not deemed it necessary thus to treat them. In the bad cases I have frequently healed old fistulous abscesses; in the favorable cases I have sometimes caused them: I am therefore inclined to think your theory correct. But my present purpose is not to speak of cases where the nerves have been, or ought to be, destroyed. It is simply to call attention to a method by which many nerves may be preserved in health, that would otherwise be destroyed—and in destroying which, as sometimes happens, one of the teeth to which they belong, too might be destroyed.

Whenever, for example, in preparing a cavity for filling I accidentally, or necessarily expose a nerve, if there are no appearances of inflammation in it—if it have not already ached, I proceed to finish my preparation as if the nerve had not been exposed. If in exposing the nerve I have wounded the membranes so as to cause bleeding, I wait until the bleeding has ceased; I then wash out the cavity and dry it thoroughly with cotton and tissue paper as in any other case. I then apply a drop of collodion over the exposed nerve, wait till the ether has evaporated from it, and then proceed to fill without any further especial care except to adapt my foil as smoothly as possible to the part where the nerve was wounded.

If the cavity is so situated that I can not otherwise apply the collodion, I take a very small piece of tissue paper on the point of an instrument, dip it in the collodion and then spread it as smoothly as possible over the point to be protected, wait the evaporation of the ether as before directed, and then fill.

Although I am fully of the opinion that Dr. Arthur's method of leaving the *softened* bone to protect the nerves of such teeth as would be exposed by its removal, taking care to remove all in the vicinity of the margins of the cavity so to make a firm foundation for the filling, and to make it impervious to fluids, although it has been pretty severely criticised is worthy of consideration, and in many cases, at least, may be the best treatment; and that therefore great care should always be taken to avoid unnecessarily exposing the nerves of teeth; still accidents will sometimes happen, and the exposing of a nerve is sometimes unavoidable, and in such cases this method in my hands has succeeded far better than any other I have ever tried or seen tried, and by it I am sure I have saved the nerves of a great many teeth that otherwise would have been lost.

The old fashioned methods of capping, with either lead or gold never succeeded in my hands; and I have but rarely if ever known it to succeed in the hands of others.

I have been familiar with the use, and have observed the effects of nitric, or of nitro-muriatic acids in such cases, about the same length of time that I have used this. Sometimes I have seen it succeed, and in many cases I have seen it fail.

I was familiar, too, with the famous "risodontrypy" or "Hullihen operation" about a year before Dr. Hullihen caused it to be publicly promulgated in the report made by the late Dr. C. O. Cone, at the meeting of "the late" American Society of Dental Surgeons at Newport, R. I., in August, 1852; the Doctor having himself written me a description of his operation with a request that I should try it and tell him of my success. For his sake I tried it a great many times, having first however expressed to him my entire want of confidence in an operation which *seemed* so entirely unphilosophical, and therefore so unlikely to succeed.

With that operation I sometimes succeeded, but most frequently failed. And of many of the operations where at first I thought I had succeeded, "time told a different," though not a "flattering tale." Such too, I am satisfied, was the result of the operation in Dr. Hullihen's own hands. I know, at least, by an observation of about two years now, in the same field where he labored, that a great many of his operations of that kind were failures. But in a pretty extensive use of the collodion for about ten years, I can hardly call to mind a failure—none where anything else ought reasonably to have been expected.

The collodion by being liquid must of course adapt itself perfectly to the wounded surfaces; and as it is very elastic when dry it produces no irritation, or far less at any rate than any unyielding substance could, even if it could fit as perfectly. By its contraction in the evaporation of the ether it most effectually prevents further bleeding during the operation of filling—a matter of first-rate importance—and it also to some extent insulates the nerve from the effects of changes of temperature, it being a less perfect conductor of caloric than the metal.

Wheeling, Va., July 21, 1859.

EXPERIENCE WITH ATMOSPHERIC PLATES FOR PARTIAL SETS OF TEETH.

BY A. BERRY, D. D. S.

Since a large proportion—probably seven-eighths of the teeth to which clasps are applied become carious in a few years as the result of clasping, it is very important to avoid this mode of sustaining teeth when practicable.

Dr. Thompson, in the American Journal of Dental Science, April, 1859, describes his mode of making clasps, which is very good as securing the closest fitting of the clasps to the teeth, and adds, "We conceive that a tooth can not be injured when a clasp is thus formed—the adaptation being so perfect as to exclude all foreign matter from penetrating between the tooth and the clasp; it is, in fact, almost impervious to the fluids of the mouth."

Should any one do what Dr. T. has "*almost*" done, the clasp, if it rested on the gums, as often occurs, would cause caries sooner than if it did not fit closely.

To be sure there are cases, rarely met with probably, in which owing to defective form of the maxillary parts, small atmospheric plates can not be retained so firmly as to satisfy the patient. It is sometimes necessary to remove these plates from the mouth at meals, if the adjoining teeth must be used in mastication. But occasionally they are held so well as to be used in dividing the food.

Some eleven years ago—not having my dental journals at hand explicit dates can not be given—a description of Dr. Cleaveland's air-chamber was published in the Am. Journal of Dental Science. Having a patient needing the incisors inserted, with no teeth suitable for clasping, I resolved at once to see what could be done with the improvement, and made a piece which proved successful. During the two or three years ensuing I constructed several of these plates, and was highly pleased with the results. About this period Dr. Dwinelle's description of his valve for air-chambers, held in situ by a delicate spring in the chamber, was published. Believing that with the valve the air could be exhausted more completely than otherwise, I made two pieces with it, a nice troublesome job, with the success of which I was highly delighted, until after a few months one of my patients broke the spring and stopped the valve opening, *when the plate was retained in the mouth as firmly as ever.*

Soon after this time I adopted the chamber known as Gilbert's, and continue to use it.

Although a perfect impression may be obtained with wax, plaster is preferable. One of my friends who is very fortunate with such plates, removes the plaster from the mouth when it begins to "set," to avoid its holding about the remaining teeth. I prefer to build over spaces the teeth are to occupy on the sides of the wax holder with the plates of wax, then to fill the other part with plaster, and let it harden well before taking it from the mouth.

For raising a plaster cast for the chamber, which I like in most cases to have a little extending on the parts rising towards the alveolar portion, I place adhesive wax rolled to proper thickness with its edges nearly to right angles to the parts it rests on, and keep it in place by the solution of gum used for varnishing the cast.

Gold of standard fineness is best for the plates; but since the introduction of California gold it is well to melt the coin before using it to obviate considerably the difficulty of holes occurring in it from fitting the plates. With a small slightly blunt instrument the plate should be driven down closely as possible around the border of the chamber. If an opening is made in the plate it may be known by the whistling produced by pressing it home in the mouth—a sound quite different from that made by air passing out around the borders of the piece. To find the exact locality of such holes is sometimes difficult; but I have succeeded, even when they were very small, by holding the plate close to one eye before a strong light, passing a finely pointed instrument about until it comes over the opening, when a mark is made showing where to flow the solder.

When the rugæ on the posterior part of the alveolar ridge are prominent they often prevent the pieces from being held so firmly as they otherwise would be. The plate may be cut away to one-fourth of an inch in width over the median line, where if there are any rugæ they are commonly small, and another thickness of plate soldered on it. If the piece be for more than one tooth, a narrow strong plate under and a little projecting behind the teeth will answer. I usually do not bring it over in front of the alveolar ridge, but set the teeth close on the gum, for which, teeth with short gums made a few years ago by Jones, White & Co., are admirably adapted.

To prevent the plates from springing I *encase* them in sand and plaster deeply, to within half an inch of the teeth on pomice stone, then place the same materials slightly under and in front of the teeth, with a strip of platinum one-third inch wide in it to render it firmer. The soldering may then usually be done by confining the flame to the part about the teeth so as not to cause the plates to warp. But if the plates spring at all they may be fully restored by cutting away the male cast so that the teeth shall not touch it, sawing away the female cast to avoid the teeth, and striking them up again.

It is advantageous to make the female cast to be used in striking the last time, of some alloy melting at a much lower temperature than lead, to secure a closer fit of plate, by avoiding the large amount of contraction of lead in cooling.

Patients in most instances readily acquire the tact of exhausting the air from the chamber; but it is sometimes gained with difficulty—and I think in one or two cases my plates were not retained in the mouth from the air not being at all drawn from the cavity.

It is best when the alveolar ridge is low to have the plate worn a day or so before arranging the teeth on it, to avoid the danger of it coming forward in gaining its final position, and throwing the teeth out of line.

Neither teeth nor plate should be allowed, when in place, to touch the natural teeth, to afford free movement of the piece in accommodating itself to the parts as the air is withdrawn from the cavity.

During the last five years I have inserted about nine-tenths of my partial sets with the air-chamber; and in my humble opinion the air-chamber plate should be used much more extensively than it is by the profession generally.

July 15, 1859.

Mr. Editor,

Sir :—You will do me a favor if you will grant me a small space in your journal to reply to an article written by Dr. Hunter on *Amalgam work.*

But in order that the profession may fully understand the position Dr. Hunter has taken, and his motives in writing that article, it is necessary I should first state of what I claim to be the inventor. The principal object of the amalgam is to fasten teeth to a gold plate, with or without soldering. I strike my plate and fit it to the mouth as usual, arrange my teeth on the plate as you would for backing, then I bend my rivets in a dovetail shape, or back my teeth with a narrow backing riveted on or soldered on as the dentist thinks best. I now make an amalgam of gold of any fineness, which I work in and around the rivets of the teeth or around the backings, filling up all lodgments for food, making a solid mass of gold as perfect as if cast, and nearly as solid. I at the same time work a rim out on my plate, building out or filling up where I choose. When this is completed to my satisfaction, I drive off all the mercury by heat, leaving nothing but the gold ; this style of work has many advantages over ordinary gold work, it is stronger, neater, and more cleanly than work can possibly be done by the ordinary method.

It does not admit the fluids of the mouth any more than continuous gum work ; it is harder than gold in the coin, but not so dense ; it will stand a high finish. I have made at least thirty pieces of this work since last March, some of the teeth have been soldered on, and some only the pivots slightly bent ; both have stood the test equally well. I have had only two teeth that has come off in that time, and that was owing to the shortness of the rivets. I have made application for a patent for my improvement, and expect to get one. I ask *no* dentist to use my improvement, but if they wish to do so, I charge them a reasonable sum for an office right ; I have published nothing on the subject nor ask any one to do so, neither have I sent circulars to the profession. Two or three of the journals have kindly spoken of the work, but very cautiously, and in no case have they recommended it to any one; they could not consistently say less than they did, and *more* I did not ask. But in every case I have requested them to condemn it, if it did not stand the test for all that was claimed for it.

It is unnecessary for me to enter into any argument with Dr. Hunter about the merits of the work he has described in his article, for unfortunately for Dr. Hunter, in no important point does he describe my work. The process he has given, the manner of preparing and using gold is *entirely useless;* but, when prepared as I prepare it, and worked as I work it, it accomplishes all I claim. It looks very strange to me that a man *pretending* to occupy the position that Dr. Hunter does, should come forward and publish an article condemning a thing that he does not understand even the first principles. I can't *understand* the Dr's motives—the most favorable construction I can give to it is, that he is *crazy.* I am afraid, however, it is *nature*, and he *can't help* it. No man in the profession has been so badly abused and so little appreciated in their own estimation, as Dr. Hunter. Some one is constantly robbing him of his inventions; all improvements in dentistry for the last fifteen years, has originated with him, but the Dr. only meets the fate of all *great inventors.* Some one is constantly stealing "his thunder."

The Dr. has very kindly given me the credit of being the inventor of gutta percha, but at the time it was first introduced he claimed to be the inventor and had used gutta percha for two or three years with good success, and was satisfied it would stand all I claimed for it. From Dr. Hunter I got the first written article in its favor, and to him I give the credit for all the benefit I received from it.

Now if the Dr. is anxious to know how to work amalgam, in order that his next article may contain some truth, and not all *guess work*, I will have him properly instructed in the *modus operandi*. I thank the Dr. for his advertisement, it is the best that I have had. N. B. SLAYTON,

Madison, Indiana.

IMPRESSIONS.

Many of the members of our profession, with a praiseworthy devotedness to the general good are contributing their experience in the art of taking good impressions of the mouth for the insertion of plates. Nearly all are agreed that plaster of paris and yellow wax are the best substances now in use for this purpose. Where all the teeth are out of the mouth, we use plaster, and think it very much superior to wax; but if some of the teeth are still standing, the difficulty experienced in the removal of it from the mouth drives us to the use of wax. The particular kind of cases to which we wish to call attention at this time, are those of very deep palatal arches, together with some of the natural teeth still standing.

We never could get so good impressions of such cases with anything else as wax. Our manner of procedure in such cases is as follows:

After having softened the wax, and placed it in an impression cup, after the usual manner of procedure for taking wax impressions, we take an additional lump of wax sufficiently large to fill the deepest part of arch—say that part bounded by the bicuspid and first molar teeth—and after making it quite soft, we wipe the roof of the mouth dry with a napkin, and press it up gently to its place. Then being careful not to allow it to get wet with the saliva, we hold that portion of the wax which is in the impression cup that will come in contact with that already in the mouth, over a spirit lamp until it is almost soft enough to run, then placing it in the mouth we press it up firmly against every part, which is to be covered by the plate. If the necessary precautions be taken, the two portions of the wax will unite, and can be removed all together, presenting a sufficiently good impression for a suction plate.

Perhaps somebody has taken impressions this way long ago, and have "*priority.*" If so, why didn't he tell us?

LANCASTER, July 18th, 1859. J. G. HAMILL.

DENTAL PUFFING.

BY A. BERRY, D. D. S.

THE advertisements of dentists afford a pretty good criterion, in many instances, by which to form an opinion as to their moral and professional standing.

The announcement of a dentist offering his services to the public is sufficient, without the addition that he has supplied himself with the best instruments, availed himself of all the latest improvements, that he can pull and plug teeth the best in the world, and insert artificial teeth, from one to a full set, so as to answer all the purposes of mastication and defy detection. I saw a physician's card in the papers a few years ago, in which he asserted, among other wonderful things, that he could cure fevers,—quite as appropriate as statements like the above by dentists.

A dentist, commencing to practice in the capital of an Eastern State about a year ago, attempted to astonish the natives by an advertisement in the papers, from which I make a few extracts.

"DENTISTRY.

"Dr. ———, Dentist, would respectfully inform the citizens of ——— and vicinity, that having just concluded a term of three years study and practice with Dr. ——— of ———, he has fitted elegant and commodious rooms in ———, where, supplied with every modern appliance or invention, with instruments of the latest and most approved patterns, enabling him to warrant all his operations, and guarantee entire satisfaction.

"Dr. ——— having at considerable expense purchased the right to use the instruments manufactured and patented by Dr. Branch, of Illinois, for the local application of anæsthesia, is now prepared to extract teeth entirely free from all pain as well as injury.

"In the insertion of artificial teeth we make use of the atmospheric pressure principle, thereby entirely doing away with the old and awkward method of spiral springs.

"Our facilities for the successful prosecution of our business are second to none in the New England States, and in point of skill, success in practice, and satisfaction received, we acknowledge no superior—surrender to no man,"

Meeting with a lady last summer who was sustaining injury from clasps carelessly applied to her teeth, I said, "You had better see Dr. ——," (the preceptor of the young dentist from whose card the above extracts are made,) to which she replied, "I have not a very good opinion of Dr. ——, he comes out every few months with such a puffing circular!" People generally have learned to suspect that dentists who advertise in the style of patent medicine dealers are no better than they should be.

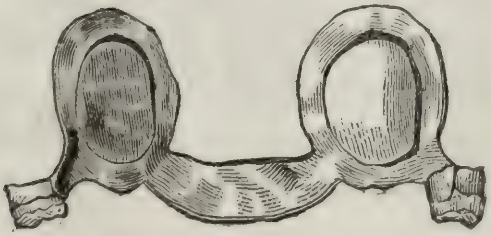
We expect quacks and venders of all sorts of humbugs to publish puffs and certificates *ad nauseam*, but no dentist with proper respect for his profession will resort to such low artifices; and no one who does so deserves any respect or courtesy from his professional brethren.

PRESSURE PLATE.

BY J. TAFT.

FORMERLY it was almost the universal practice, to attach partial sets of teeth by clasps; within the last few years, however, an increasing effort has been made, to devise some method of retaining such pieces without the aid of clasps. The only method available for the accomplishment of this purpose is atmospheric pressure plates. In the great majority of cases, with the improvements now employed, this can be accomplished; ordinarily this is done by forming a plate, generally with a chamber, that shall cover a considerable portion of the palatal arch. Under ordinary circumstances, when four, six, or eight teeth are to be supplied, this arrangement is available, but when there are one or two teeth to be supplied at each side—the bicuspids for instance—there is frequently considerable difficulty experienced in arranging an ordinary atmospheric pressure plate; pressure upon one side alone, has a tendency to detach the plate at the other. I have recently had occasion to insert the second superior bicuspid upon each side; it was desirable to avoid the use of clasps, and yet avoid the use of a plate that would cover a large portion of the arch. A cavity plate about the size of a dime, was made for each tooth, and the tooth attached in proper position, the plate resting on the side of the arch; in juxtaposition to the space to be occupied by the tooth, these two plates are attached together in proper relative position, by a band of gold about two lines in width, passing from one to the other, from two to three lines posterior to the inner portion of the front teeth; this strip is swedged so as to fit the arch perfectly, it serves to keep the plates in place, and by it, each one sustains the other to some extent.

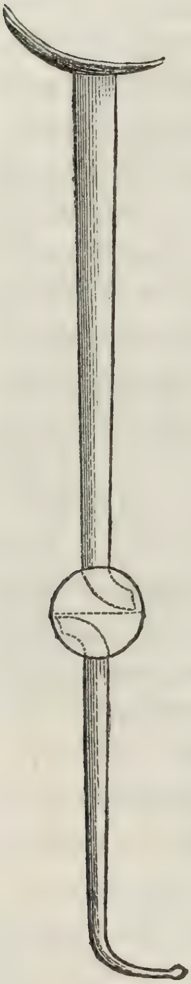
This arrangement serves a valuable purpose, much better, I think, than the common single cavity plate would do in the same place, and with not more than one-third the amount of gold. The same principle would be equally applicable for the insertion of two or three teeth upon each side. The following cut represents fully the piece above described, and this in connection with what has been said, will give a perfect idea of the plan.



[For the Dental Register.

A FILTERING BLOW-PIPE.

In consequence of the inconvenience suffered by the old method, and the loss usually sustained by the frequent breaking of the teeth, whilst undergoing the process of soldering, I was induced to devise some means whereby this might be obviated.



Accordingly, I constructed what I have styled a filtering blow-pipe, a rude drawing of which I forward with this description.

The pipe which I use is fifteen inches long; its larger orifice is one half inch in diameter; its terminus or smaller end, is tipped with the point of an ordinary gas burner furnished with a very small aperture.

There is a turned brass globe an inch and a quarter in diameter, situated one-third from the smaller end, which is put together by means of a screw; and in the more distant hemisphere of this globe, around the end of the pipe, there is nicely fitted a very fine sponge, which serves an excellent purpose as a filterer, taking up every particle of the *spray* caused by the breath, and thus removing a very common cause of fracture of the teeth most effectually.

Supposing the globe to be *glass*, the drawing gives you the pipe in perspective when put together, divested of the sponge. I have been using this pipe exclusively, for the last four years, and with a single exception, have not broken a tooth *old* or *new*.

WM. WM. MORGAN.

Somerset, Pa., July 14, 1859.

REMARKS ON PORCELAIN WORK,

BY M. LOOMIS.

Delivered before the Am. Dental Convention, Aug. 4, 1859.

MR. PRESIDENT:—Three years ago, I stated in this Convention that I had a plan for making sets of artificial teeth by substituting mineral for metals; and from the same kind of percelain that mineral teeth are made. I construct an artificial denture entire,—teeth and plate continuous and of the same material.

At that time I had some three years' experience in making and testing the method, and was firm in my belief of its pre-eminent superiority; and during the three years which have followed since then, many others as well as myself, have been constantly engaged in making and applying the same kind of teeth, and I must say, that in all instances patients have attested their utmost satisfaction, frequently returning to express their appreciation and gratitude, and in scarcely *an instance*, during the past five years, has a patient returned to me at all dissatisfied, or with the teeth in any way injured. And I do say, most emphatically, that where this plan is adopted the work of repairing will be abandoned *in toto*, for artificial teeth will no longer wear out, and the ratio of loss or destruction by accident is not more than one in fifty.

Notwithstanding, a great many discouraging things have been said about this method, but they originate either in prejudice, or ignorance of its real merits; for where a thing is made so beautiful and so absolutely perfect as these sets are, and are so entirely pure and clean in fulfilling their purpose, *and fulfilling that purpose so well*, and never wearing out or giving way, as theory and trial have abundantly demonstrated, it certainly leaves nothing to desire in an artificial denture. I have now watched and tested it, as I said, in practical operation for six years, and I do not know of a single objection to be brought against it, other than that it *is artificial.*

Persons for whom it has been made and who have tried different kinds, and who measure its usefulness and value by the test of rigid experience, are unanimous in declaring a very great preference for this; and those who have lost the teeth that nature gave them can best appreciate what it is to have an artificial perfection.

There may be,—yes, there *are* those whose pecuniary interests are adverse to the introduction of this style of work. This fact, together with prejudice and an ignorance of its merits, and bearing also the burden of Letters Patent, form a heavy clog to its progress, and though it is gaining ground slowly—as all really valuable things generally do, yet it *is* gaining nevertheless; and, mark my words, the "Mineral Plate" is gaining that ascendancy which it never will yield up, and though the time may seem remote to its enemies, and those who have little faith in it, yet it is as sure of universal adoption as the sun is to rise and set in coming years; for it is based upon common sense and natural principles, pointing out such a success with mathematical accuracy.

I am not here to decry other styles and other practices, but to say a very few words in a very short time in relation to the merits of a practice, as yet comparatively little understood or appreciated by our profession.

I will match my style for sets of teeth, in point of artistic beauty, durability and practical usefulness with any thing which our profession has yet known, *and will challenge the* WORLD to produce any thing which will compare favorably with it.

In simplicity of construction, in expensiveness and durability, it certainly is the great desideratum of artificial work. Will it be contended that it is difficult to make? We who are familiar with its construction, find it to be a more refined order of work, more artistic, less laborious, and by far the easiest method yet devised to make a reliable set of artificial teeth; and, if need be, the best article which art can thus produce can be afforded to the poor, at a price below all competition. But its construction, like all other nice manipulations requires judgment, skill and practice. And although many who have long been in practice may be adverse to serve an additional pupilage to acquire the fullness of their profession, yet I hope no one will carry the dislike so far as to be content with our present knowledge, or to deem a thing worthless simply because it has not transpired before. Let me say in conclusion, gentlemen, *try* this style for sets of teeth, put them into the mouth *and test them severely*, and you will believe what I say, that it is the *ne plus ultra* in this department of dental science, for I am taught by that experience which does not deceive, and if I am enthusiastic, it is because I have abundant reason to be, from its complete success.

FANG FILLING.

BY W. H. SHADOAN.

MESSRS. EDITORS:—In the July number of the Register, I notice an article entitled "Fang filling," by Geo. Watt, which article is the first that has come under my notice that has so completely described my own process of filling teeth where the destruction of the nerve was absolutely necessary. The author of the article above referred to says, and very correctly too, that to fill all the pulp cavities of the teeth would be rather difficult. I find it so, and more particularly the anterior cavities of the molar teeth, when the posterior proximal surface is decayed, forming the only ingress to the pulp cavity.

I have been at a loss to know exactly how the advocates of fang filling manage to prepare the cavities of the molar teeth to the apex of the fangs, and introduce and properly manipulate the filling of the same. It does seem to me, when they say that they fill the entire canal of all the teeth, that they just mean to say, that they fill as far as they conveniently can, and that they do not intend to say that they fill the entire canal, at least this seems to me the most probable.

I would ask the question, *how do the advocates of fang filling manage in case they find a tooth to be filled*—say the second or third inferior molar—*that the posterior proximal surface is decayed and nerve is exposed, the destruction of which is inevitable*, and of course "the fangs will have to be filled, or the tooth cannot be saved." How do they excavate, cleanse, and properly manipulate a gold filling to the apex of the anterior fang of said tooth?

My practice has always been, since I have been in the practice, to fill all the fangs that I could where they needed it, but in no case have I been able to fill one of the above described cavities. Now the only reason that unless there is an opening made to the fang from the surface next it, the fang cannot be prepared, and consequently cannot be filled: beside, the nerve cavity is so small, that it takes a very nice operation to prepare the cavity to its apex. My experience has proved to me, that to fill the cavity of decay properly, and have all the nerve removed, and the nerve cavity properly cleansed, is about all that is necessary. One would ask how do you do this, and what is your success in your operations? My process is this, I destroy the nerve most generally with cobalt and creosote, sometimes however, I use other agents, such as arsenic, nitric acid, and chloride of zinc, but find that the cobalt and creosote are the best. After the nerve is destroyed, I remove it so far as I can, then wash out the cavity with Dr. Tefft's anæsthetic preparation, then with creosote and laudanum, mixed half and half, and lastly with creosote alone.

After it is well washed out, I wet a pledget of cotton and let it remain in the cavity about from six to ten or sometimes fifteen hours. I then find in nine cases out of ten, that the soreness is all dissipated, and the decayed matter sufficiently infused with the creosote to form an insoluble compound, which makes no real difference, whether it is removed or not. I find it necessary sometimes to treat the fangs of teeth for several days, but generally I am successful with the first operation.

I find that the safest plan is to treat as above until all the soreness is gone, then for fear of failure, only fill the pulp cavity to fangs, let it remain for a few days, and see whether it is going to cause any trouble, if not, then you may finish the operation with safety.

I have noted since the first of March, 1858, about thirty or forty cases, some of which were almost hopeless, as there had been alveolar abscesses formed at the roots of the teeth, prior to their application for an operation. Of the number noted, I do not think I have lost more than three or four, and I believe the cause of the loss of them was for want of time and care, not on account of the manner of procedure, or in the kind of treatment.

To say the least of it, I believe that I was as much to blame as any body or any thing; in other cases more aggravated, I have been successful, proving to me beyond a doubt, that if I would take the time, and my patients would all be punctual in their attendance, and would follow the directions, that I would not lose one case in twenty.

I would report several cases, but I hardly deem it necessary, as Dr. Watt, in his essay, gave several very interesting cases, that would correspond in the main with those I would report, so I will only report one or two at present, believing that it will be sufficient to convince the skeptical that there are other modes of doing business than that first conceived, or at least if our fathers used to carry a stone in one end of the sack to balance the other, it is no reason that we should do the same.

CASE I.—Mrs. M. H. S., aged 45. Health good, teeth bad, first bicuspid badly decayed. Destroyed nerve on the 7th of July, 1858, filled on the 9th.

Formula.—Destroyed the nerve with cobalt and creosote, extirpated as far as possible, treated with creosote on cotton, for two days, then plugged. September 8th, patient called suffering from the tooth just named. The conclusion I came to was, that there was some of the pulp remaining which had caused this trouble. I drilled a hole through the plug and into the nerve cavity, which emitted a very offensive matter, syringed the cavity with creosote and chloroform, separate; patient got well, and no more complaint until the 29th April, 1859, the filling came out. I put in another, since which time there has been no more complaint.

Case II.—R. Y., aged 32, teeth good, health good, called to have the left superior first molar extracted, after trying the second time to no purpose, he protested against any farther trial; I then destroyed the nerve with creosote and cobalt, and on the next day, January 20th, 1859, I filled the tooth. I have heard from him several times since, and at present there is no complaint.

Proceedings of Societies.

Niagara Falls, August 3d, 1859.

The delegates appointed by the various existing Dental Associations to meet at this time, with a view of forming a National Delegated Association, met according to previous notice. Dr. W. W. Allport was chosen chairman, and Dr. J. Taft, Secretary. On motion,

Resolved, That a Committee of three be appointed to examine and report on credentials.

Committee.—Drs. Taylor, Wright, and Suesserott.

REPORT OF THE COMMITTEE.

Upon examination the following persons were found to be duly authorized delegates, and present:—

Mississippi Valley Dental Association. — S. L. Hamlin, H. McCullum.

Ohio Dental College Association.—H. A. Smith, Jos. Richardson, J. T. Toland, J. Taft, G. W. Keely, Geo. Watt, E. Taylor.

Pennsylvania College of Dental Surgeons.—Wm. Calvert.

Western Dental Association.—D. W. Perkins, W. W. Allport.

Penn. Association of Dental Surgeons.—J. H. McQuillen, J. L. Suesserott, T. L. Buckingham, Geo. T. Barker.

Indiana State Dental Association.—J. F. Johnston, A. M. Moore, P. G. C. Hunt.

St. Louis Dental Association.—H. J. McKellops, I. Forbes.

Pittsburgh Dental Association.—W. M. Wright, R. Vandervort.

Cincinnati Dental Association.—C. H. James, J. G. Cameron.

Ohio Dental College.—James Taylor.

J. L. Suesserott,
W. M. Wright, } *Committee.*
Jas. Taylor,

On motion of Dr. McQuillen,

Resolved, That a Committee of three be appointed to draft a constitution, or plan of organization for this meeting. Committee—McQuillen, Richardson, W. M. Wright.

Adjourned till to-morrow, 4 P. M.

Thursday, 4 P. M.

The delegates met according to adjournment. The Committee on constitution for the purposed Association was called upon and reported. Before reading the constitution, Dr. McQuillen took occasion to make the following prefatory remarks:—

Mr. Chairman and Gentlemen:—The Committee appointed by this Convention to draft a Constitution, beg leave to state that they have attended to the duty assigned them;

and would respectfully offer the following plan of organization. Trusting that its imperfections and short-comings may be remedied by *your reflections* and the *judgment* of *those* who shall participate in the final adoption of *a Constitution* for the proposed Association. A due regard for our own reputation as well as a just appreciation of the rights of others, make it obligatory that we should state, and desire the same to be placed upon record that, the plan of organization we submit to you is based upon a constitution that was framed by some of the brightest, and best minds of our Country, after years of deliberation. We refer to the American Medical Association.

After which the report was read.

On motion of Dr. James Taylor,

Resolved, That the report be referred back to the committee, with instructions to mature and amend, if necessary, and publish in the Journals as early as next November.

On motion,

Resolved, That this Association holds its next meeting in Washington City, on the last Tuesday in July, 1860, at 12 M.

On motion,

Resolved, That this Association suggest to the Dental practitioners residing in sections of the country, where there are no local or State societies, the propriety of forming such Associations, and electing delegates to meet this Convention at its next meeting.

On motion,

Resolved, That the delegates representing this Convention to be held next July, be practitioners of Dental Surgery, and that each College be entitled to one delegate, and each Association be represented by one delegate for each five members.

On motion,

Resolved, That Dr. James Taylor be appointed a committee to procure suitable rooms, and make all necessary arrangements for the next meeting.

On motion of Dr. Taft,

Resolved, That five persons be appointed by the chairman to prepare Essays to be read at the next meeting.

The following persons were appointed, each selecting his own subject.

Dr. J. TAFT. "Secretions of the mouth—Saliva and Mucus."

Dr. MCQUILLEN. ———

Dr. JOS. RICHARDSON. "The agencies concerned in the removal of the roots of the deciduous teeth."

Dr. GEO. WATT. ———

Dr. T. L. BUCKINGHAM. "Electricity—its connection with Dentistry."

Adjourned to meet at Washington City, D. C., on the last Tuesday of July, 1860. J. TAFT, Sec.

No other subjects than those designated for essays were selected for discussion. The subjects of the essays will be open for discussion, and the essays to criticism; this will probably occupy all the time that may be available outside of that employed for strictly business purposes.—ED.

AMERICAN DENTAL CONVENTION.

FIFTH ANNUAL MEETING.

BY OUR OWN REPORTER.

THE AMERICAN DENTAL CONVENTION met at NIAGARA FALLS, August 2d, 1859. The President, Dr. Isaiah Forbes, in the chair, and the other officers in their places.

The President, on taking the chair, welcomed the brethren to Niagara, and expressed a hope that their thoughts and actions, in the proceedings about to be conducted, would be as energetic, though less noisy than the great cataract itself. He hoped that, in any discussions which might follow, each member would state his own *peculiar* views, and omit every thing that was merely common-place or uninteresting. He stated farther that, to be entitled to the privileges of membership, it was necessary to enroll their names on the Treasurer's book, and pay to him the assessment levied by the Executive Committee, which, he stated, was two dollars for each member.

The minutes of the last day of the former session were read and approved. The President stated that, as the Report of the Executive Committee had been published, it would be regarded as adopted, unless objections were offered. The chairman of said committee, Dr. Allport, requested the privilege of changing the report, so as to admit of "Miscellaneous Business" at any stage of the proceedings in which it might seem proper to do so. The request was granted, by common consent.

The Treasurer, Dr. W. B. Roberts, presented his Report, which was accepted, and referred to the Executive Committee.

The committee appointed to memorialize Congress on the appointment of dentists to the army and navy, requested farther time, which was granted. Dr. James Taylor, of Cincinnati, is chairman of the committee.

A short recess was now announced, to give opportunity to subscribe the roll of membership, and pay the annual assessment.

The following is the list of members present, as enrolled on the Treasurer's book :—

Maine.—J. Mason, Saco; L. B. Straw, Bangor.

Vermont.—J. R. Lewis, Burlington; M. Tefft, West Poultney.

Massachusetts.—W. P. Dillingham, Boston; Abel Ball, Boston; W. D. Sanborn, Haverhill; J. Fisk, Clinton; D. B. Ingalls, Clinton; E. T. Wilson, Boston; S. P. Miller, Worcester.

Connecticut.—W. Potter, Norwich.

New York.—Geo. H. Perrine, F. H. Norton, T. H. Burras, Geo. Clay, E. A. L. Roberts, R. McIlroy, M. Levitt, James Pierson, C. S. Weeks, Sam'l Hassell, J. G. Ambler, B. W. Franklin, W. B. Roberts, New York City; L. W. Rogers, Utica; L. F. Harvey, Buffalo; H. Hodge, Green; E. M. Skinner, Syracuse; Geo. F. Foote, Buffalo; H. A. Coe, Theresa; C. Elmendorf, Penn Yan; S. F. Tremaine, Rome; J. C. Gifford, Westfield; S. B. Palmer, Onondaga County; E. C. Hill, Niagara; E. Ware Sylvester, Lyons; T. Matson, Auburn; H. T. Tower, Lyons; A. Blake, Sardinia; Alfred Miner, Niagara; P. Harris, Skaneateles; P. B. Briston, Dansville; T. D. Evans, N. Y. Mills; D. S. Goldey, Oswego; A. Westcott, Syracuse; C. N. Whitney, Buffalo; S. W. Robinson, Watertown; John Lewis, Buffalo; E. D. Fuller, Peekskill; R. G. Snow, Buffalo; B. S. Whitney, Buffalo; S. N. Smith, Auburn; C. B. Foster, Utica.

New Jersey.—R. V. Jenks, Patterson.

Pennsylvania. — A. M. Asay, Philadelphia; H. B. Blair, Columbus; B. M. Gildred, Harrisburg; J. R. McCurdy, Philadelphia; A. B. Robins, Meadville; W. H. Luce, O. S. Elliott, Erie; J. L. Suesserott, Chambersburg; T. L. Buckingham, Geo. T. Barker, J. H. McQuillen, Philadelphia.

Delaware.—Wm. G. A. Boneville, Dover.

Virginia. — E. G. Winchell, Wheeling; Jona G. Wayt, Richmond.

Georgia.—D. S. Chase, Augusta; B.B. Alfred, La Grange; F. Y. Clark, Savannah.

Missouri. — Edgar Taylor, Palmyra; Isaiah Forbes, H. J. McKellops, St. Louis.

Kentucky.—Daniel Dougherty, Bardstown; H. McCullum, Augusta; J. L. Nourse, Cloversport.

Illinois.—W. W. Allport, Chicago.

Ohio.—W. H. Atkinson, C. R. Butler, G. Langsdorff, B. Strickland, Cleveland; R. McDowell, Wooster; E. P. Crowell, Cleveland; C. Palmer, Warren; Geo. Watt, Xenia; J. C. Burroughs, Warren; M. M. Oldham, A. A. Blount, J. Ramsey, Springfield; G. W. Keely, Oxford; C. M. Kelsey, Mt. Vernon; G. L. Paine, Xenia; C. P. Bailey, Cuyahoga Falls; H. A. Smith, S. L. Hamlin, Jas. Taylor, J. Richardson, C. H. James, J. G. Cameron, J. Taft, Cincinnati.

Mississippi.—Geo. S. Cook, Milford.

Michigan.—Wm. Cahoon, Detroit; C. B. Porter, Ann Arbor.

Florida.—P. P. Lewis, Tallehassee.

Brazil.—Van Tuyle, Brazil.

Canada West.—C. S. Chittenden, Hamilton; A. C. Crysler, Clifton; J. L. Walter, St. Catharine's; E. V. N. Relyca, Bellville.

Wisconsin.—D. W. Perkins, Milwaukee; L. George, Kenasha.

District of Columbia.—M. Loomis, Washington.

Indiana.—G. A. Wells, Indianapolis; Geo. Lupton, Shelbyville.

Miscellaneous business being in order, the President announced that he had received, through Dr. J. R. McCurdy, a letter from the "COLLEGE OF DENTISTS" of England. The reading of the letter being earnestly called for, Dr. McCurdy, by request of the chair, read the same, which is as follows:—

To the Chairman of the Meeting of the "American Dental Convention," to be held at Niagara Falls, on Tuesday the 2d August, 1859.

DEAR SIR:—We are instructed by the Council of the College of Dentists of England, to address you on the occasion of your important annual gathering at Niagara Falls, in the ensuing month of August.

A few months since, many of the Dentists of this country anticipated the pleasure of inviting their trans-atlantic brethren to a general professional gathering in London, in the year 1861, at which period it was understood a universal Industrial Exhibition, similar to that of 1851, would be held.

The hope of such an Exhibition at the period indicated, is however, dispelled, in consequence of the present disturbed state of the continent of Europe, which has not only paralyzed all industrial efforts, but must inevitably retard civilization in many neighboring countries.

You are, doubtless, aware that differences of opinion in the ranks of our profession in England have tended, very materially, to check that unity of action which is so essential to the attainment of perfect organization and success; but we trust these differences will be speedily removed, so that, when the time is opportune for another "World's Convention," the *unanimous* invitation of the Dentists of England may go forth to their brethren in America. In this hope the Council most cordially indulge, and it would give to the several members great satisfaction, to welcome their American brethren to the shores of Great Britain, and especially with a view to the holding of a meeting in London, of the "American Dental Convention." We have the honor to be

Dear Sir, Yours faithfully,
GEORGE WAITE, M. R. E. S., *President.*
SAMUEL LOE RYMER, } *Secretaries.*
ANTH. T. HOCKLEY, }

5 CAVENDISH SQUARE, London,
15th July, 1859.

The Convention returned a hearty and unanimous vote of thanks to the "College of Dentists," for the interest manifested in the welfare of the profession in America. On motion, Dr. McCurdy was requested to return an answer, in behalf of the Convention.

On motion of Dr. Taylor, it was resolved that speeches be limited to ten minutes each.

At this stage of the business, much time was thrown away in discussing various schemes for obtaining a report of the proceedings of the Convention. The whole matter was finally left with the Journals.

The Convention next proceeded to the election of officers, which resulted as follows:—

President, L. W. RODGERS, Utica, N. Y.
Vice-President, GEO. WATT, Xenia, O.
Recording Secretary, FRANK FULLER, Portsmouth, N. H.
Corresponding Secretary, P. P. LEWIS, Tallehassee, Fla.
Treasurer, D. S. Chase, Augusta, Ga.

Executive Committee.
GEO. F. FOOTE, Buffalo, N. Y.
JOS. RICHARDSON, Cincinnati, O.
T. H. BARRAS, New York, N. Y.
J. MASON, Saco, Me.
S. W. ROBINSON, Watertown, N. Y.

SECOND DAY, WEDNESDAY, AUGUST 3rd.

Convention met, President Forbes in the chair. The minutes were read and approved. The Executive Committee reported that they found the Treasurer's account correct, and that it shows that the indebtedness of the Convention is $12 04.

The address of the retiring President being next in order, Dr. Forbes arose and said:—

GENTLEMEN:—In seeing so many of you present this morning, I conclude that the thunders of Niagara have awakened the energies of my professional brethren; and, when I find that so many of you have brought your ladies with you, I conclude that it has also aroused your gallantry.

He then announced, as his subject, "*The duties we, as professional men, owe to our patients.*" And the first duty, he said, is to instruct them in the principles of our science—to endeavor to make them as well acquainted with the duties and responsibilities of the profession as ourselves. If ladies were present he would address himself directly to them, and beg leave to enforce on their minds the great responsibility resting on them. He would call to their mind the little babe, thrown into convulsions by the tortures of first dentition, and would ask them if they did not regard it as among their first duties to call in the aid of the family dentist, when the little nursling first showed signs of suffering from this cause. They might, however, object that they have not confidence in their dentist. Well, in former times they might not, but the dentist of *to-day* is entitled to their confidence. He would say to mothers, let no daughter come to womanhood with defective teeth; and especially, if that daughter were about to marry, see to it that her teeth are all in good condition, and her mouth healthy. This, he said, was important both for her comfort, and on account of the impaired vitality which might be transmitted to offspring by the opposite course.

Parents, he said, must be taught to recognize and distinguish the different classes and grades of teeth. When the first permanent molars are decayed, how often the parents rest content, and when called to notice them, tell us they have not shed them yet. Mothers are not better posted up on the first molars than they were twenty years ago; but this state of things must not be continued.

Our patrons must be instructed, he said, to call on the dentist before the nerve of the tooth is exposed. At our last Convention a member stated that whenever he found a pulp exposed, he thought "Why the —— (Sampson?) didn't you come sooner?" He could heartily sympathize with that member. In conclusion, he alluded in glowing terms to the life and character of the lamented TOWNSEND, whom all acknowledge as the father and founder of this Convention, and hoped that all would endeavor to imitate his virtues and strive after the same degree of excellence.

The retiring President now appointed Drs. Taylor of Cincinnati and Westcott of Syracuse, to conduct the President elect to the chair.

Dr. TAYLOR, in a few words, introduced President Rodgers to the Convention, who, before taking his seat made the following remarks:—

GENTLEMEN:—It may not become me to dispute the wisdom of the choice you have made for President; yet a single glance over this Convention assures me that whatever considerations of ability or fitness may have determined your choice, it was not made with primary regard to professional standing or attainments. And, while I fear I may not equal your expectations, even as a presiding officer, I am yet profoundly grateful for such an expression of your confidence and esteem.

Gentlemen: I am proud of the American Dental Convention. I have attended every session since it was organized, and have always been highly gratified with the personal appearance, general intelligence, liberal views, and social habits of those who have been present. And I will venture to say that for courtesy and gentlemanly deportment in their debates, for sobriety and freedom from all excess in their seasons of festivity, these gatherings will bear a favorable comparison with general conventions of any profession, trade or calling in the country. Such has been their character in the past,—What shall it be in the future?

It seems almost impossible to organize an association, even for religious and moral purposes, that will not soon be rent asunder by dissensions. If we would avoid such a result we must shun the rock on which others have split. Let us continue to cherish a spirit of kindness, concession and fraternal regard. While we freely discuss all questions of general interest, let us carefully avoid whatever is merely personal and local. We must strictly adhere to the rule that as a body we will not assume to decide upon the merits of any theory, invention, or mode of practice, but leave every member free to pursue his own course, responsible only to his patients and the community in which he lives.

And, Gentlemen, we must be willing to sacrifice something of personal opinion, for the sake of harmony; and in all that pertains to the organization and government of this body, submit cheerfully to the will of the majority. Union and harmony, under *any* organization, are better than dissension and division. "United, we stand; but, divided, we fall."

By strictly observing the same general policy which has guided us in the past, this Convention will become a permanent and useful institution—an honor to the profession, and a model for other associations.

Thanking you once more for the honor you have done me, I assume the duties of the office, relying upon your coöperation to enable me to discharge them satisfactorily.

DISCUSSIONS.

I. "*When, and under what circumstances, should teeth be extracted, to secure a correct development of the permanent teeth?*"

Dr. TAYLOR read a lengthy essay on this subject, which will appear hereafter in the original department of the Register. Many seemed to think this paper covered the entire ground, and were disposed to pass to the next question.

Dr. Ambler, of New York, spoke of the great importance of this question, and of the conflicting opinions held in regard to it.

Dr. Westcott moved that the question be divided, and the motion carried; but as none of the speakers (not even the mover), seemed to pay much attention to the division, the proceedings will be better understood by leaving it out of consideration.

Dr. Westcott inquired if it was *ever* proper to extract the child's teeth till nature indicates the time by the absorption of the root, or protrusion of the permanent tooth. He said he often felt obliged to extract them before this—often long before. Here he differed from Dr. Taylor, if he had correctly understood the import of the paper just read. He remarked that it was difficult to speak on the subject, unless specific cases were presented.

Dr. Perkins gave a case in which the patient, not yet four years old, had the four lower incisors protruding behind the temporary teeth, the latter being still firm. He asked Dr. W. how this case should be treated.

Dr. Westcott said he would extract the temporaries.

Dr. Perkins reported another case where the permanent centrals were too broad for the space between the temporary laterals, the centrals being half protruded and held in an irregular position by the laterals: he inquired of Dr. W. would he extract the laterals.

Dr. Westcott replied that he did not come as counsel.

Dr. Perkins, being called to answer his own question, stated that he would extract them; and, in all cases, where the retention of the temporary organs would cause irregularity of the permanent ones, he would extract without regard to age. It was often necessary, finally, to remove a permanent tooth, from each side, to make room. He also reported a case in which the temporary canines occupy the place of the permanent laterals. The patient is aged 17. He would not extract the temporary organs in this case.

Dr. WHITNEY said he was very frequently called on to extract the temporary molars, and that he always refuses, unless ulceration has taken place.

Dr. J. ALLEN said he advised parents to have the temporary teeth retained as long as possible. We should not be too much concerned about a little irregularity, but should remember that the jaw is still expanding, and that the temporary molars occupy more space than the bicuspids. He would not prematurely remove the temporary teeth unless compelled by disease. He thought the permanent germ was often destroyed by premature extraction of the deciduous organ.

Dr. CORMACK said there was no sure indication as to the time of extracting to prevent irregularity. He spoke of a case in which the temporary laterals were extracted to make room for the permanent centrals,—the permanent laterals never appeared, and the centrals, though crowded at first, separated to the extent of a line and a half. A daughter of this man's niece has retained her temporary laterals, which stand firm and are filled with gold.

Dr. SANBORN remarked that the temporary laterals might remain firm, longer than would be advisable to let the permanent centrals remain in an abnormal position. If the laterals be extracted, the centrals come into line, but the laterals come alike irregular.

Dr. ASAY said that, in estimating the probable results of any case of irregularity, it was important to see the parents. If both parents had broad, well developed dental arches, we might rest content that all could be righted in due time. If the parents were unlike in this respect, observe which parent the child resembles in dental development.

Dr. STRAW said that when the first permanent molar decays early, it is generally worth but little, and should be removed to make room.

Dr. CLAY said he had usually left the temporary organs as long as possible, but was now doubtful about it being the proper course. He mentioned a case in which the temparary lateral was removed, at nine to eleven months, and the permanent teeth came all right.

Dr. Coe inquired if the temporary molars were more liable to decay than the incisors.

Dr. Atkinson remarked that, to get a good development, it was necessary to have a healthy organization. He objected to the phrase "contracted jaw." A want of expansion by development and growth was the proper idea. He would rather have a denture very irregular, with the roots of the teeth perfect, than to choke off the deposit of bone for process, by too early use of regulating apparatus. He alluded to the prominence of the upper front teeth and processes of children caused by sucking the thumb, or an equivalent body.

Dr. McQuillen said it was important first to consider how the fangs of the deciduous teeth are removed. He was not satisfied with any of the theories ordinarily advanced on this subject. He thought we must look to the law that governs the functions of nutrition, absorption and deposition. Atrophy and growth depend on the ratio of these to each other. When an organ is not needed, or not used, it becomes atrophied, as is witnessed in the shrivelled arms of Indian devotees. He believed the matter of the old fang was used in making the new.

Dr. Taft thought we ought to examine principles rather than isolated cases in which we have not a knowledge of all the circumstances. He would let the temporary teeth remain, if healthy and the permanent are not making their appearance. If uncontrolably diseased, he would remove them. He did not know how far the development of the permanent teeth might be influenced by the presence of the temporary. If the pulp of a temporary tooth was dead, but no irritation resulted from its presence, he would let it remain.

Dr. Miller thought that but little is known on this subject as yet.

Dr. Westcott said that, when the question was divided, he thought there was but little left of the second part, but was now of a different opinion. He said that the permanent teeth will be developed in place or out of place, in spite of the temporary organs. He referred to cases in which perfectly formed permanent teeth were found deeply imbedded in the jaws, having never made their appearance through the gum. He did not know what causes the absorption of the deciduous fangs. He agreed with Dr. McQuillen, that it was not direct pressure. The theory of a carneous body eliminating an acid to remove them, he regarded equally as gratuitous as the idea of a peculiar acid being secreted at the tip of the tongue, to destroy the front teeth by abrasion.

Dr. Roberts spoke of a case in which a cuspid appeared late in life, but became a perfect tooth, and assumed its proper place in the arch. He inquired whether the tooth had previously grown to its normal size, and lain dormant in the process, or had failed to grow till near the period of its eruption. No one answered his question.

II. *Mechanical appliances and forces to correct irregularities of the teeth.*

Before commencing the discussion of this subject, it was resolved that members be restricted to one speech each, till all who desire to do so had spoken.

Dr. Westcott exhibited models and appliances illustrating his successful treatment of a case, in which all the upper teeth shut inside of the lower. We cannot do justice to this case in this report; but Dr. W. promised to describe it at length for the Register, when we will endeavor to have it fully illustrated with engravings.

Dr. W. B. Roberts recommended a perfectly fitting vulcanite plate, left thick adjacent to teeth which it is desirable to move. Then, by sawing a small notch in the plate, wedges of soft wood may be inserted from time to time, to keep up the desired pressure. If an inclined plane on the lower teeth was required, he also made it of vulcanite.

Dr. Asay recommended willow as the best wood for wedges.

Dr. Buckingham uses a stamped silver plate for making inclined planes. To expand the jaw, he uses a plate, and spreads it as occasion requires. The plate keeps the clasps from irritating the gums.

Dr. Franklin stated that many of the dentists in New York had exclusively adopted the vulcanite material, in the construction of regulating appliances.

Dr. Asay remarked that appliances for regulating should be worn night and day, and should be fastened, so that there could be no danger of swallowing them.

Dr. Westcott (by request) stated that as to the proper age for regulating, he would never begin till all the teeth are shed, and would not be discouraged even if the patient were not very young. He had not been successful with plates, in expanding the jaw as just described by Dr. Buckingham, but had with a bent wire with clasps pressing against the bicuspids and molars. A thread should be attached to the appliance and tied around a tooth to avoid the risk of swallowing it. He objected to the use of elastic substances in making pressure.

Dr. Atkinson made an inquiry in regard to the propriety of elongating the cuspids, or other front teeth, when they were too short.

THIRD DAY, AUGUST 4TH.

III. *Under what circumstances, and in what manner should teeth be filed, to remove superficial decay, or preparatory to filling, to leave them the most secure from future decay?*

Dr. Taft said that filing, to remove superficial decay, was practicable only on certain parts of the tooth; for example, it was practicable on approximate surfaces, but not in the depressions of the molars or bicuspids. It was more frequently serviceable on the front, than on the back teeth; and to be successful, it was necessary that the decay be quite superficial, that it can all be removed. A very slight concavity or depression might be admissible, in favorable positions on well organized teeth; but if the teeth be soft the decay will be renewed. We are commonly told, he said, to leave a shoulder, in filing the approximate surfaces of the front teeth; but, if their texture be soft, this he considered bad practice. The surface should, in all such cases, be as plain as possible. Nor was filing all that was necessary. The surface should be stoned, buffed and burnished. Some teeth, he said, would decay, almost as certainly as the bone was exposed.

As to the manner of filing, he would avoid, as far as practicable, the mutilation of the front teeth. He would, therefore, let the space be greater posteriorly than anteriorly. If there is a tendency to inflammation, it is necessary to manipulate cautiously. He would support the teeth while filing. A cutting instrument, he said, was often preferable to the file. It produces less irritation, and inflicts less pain. It should, however, be followed by a fine file.

Dr. ATKINSON said it was important to have a few basal facts, or principles, that all could understand. If the decay did not extend through the enamel, the skillful use of a fine file, followed by a proper polishing material, rendered the tooth as good as ever. If through the enamel, and consolidation of the dentine had taken place, he would pursue the same practice; but, if the dentine is softened, he would expect little or no benefit from filing.

Dr. ROGERS inquired how far the enamel preserves the tooth, and suggested that polished toothbone would resist decay as well as enamel.

Dr. CHASE thought that great care should be taken not to deform the teeth by the use of the file. If filed so as to fall together again, decay would be renewed on the filed surfaces. He would leave the spaces between the front teeth wider posteriorly than anteriorly. He would not have the filed surface a perfect plain—would make them oval on the molars, so that the tongue could displace particles of food; and, in general, he would leave a shoulder, to prevent the contact of the filed surfaces.

Dr. Perine thought there was danger of using the file too much and too harshly; and said that the temperament of the patient should always be taken into consideration.

Dr. Fuller, of Peekskill, recommended oxyd of tin (tin putty) as a polishing material for filed surfaces. A free use of the file was generally, he thought, the most successful. On molars, he left the space v shaped, wider lingually than labially, so that the food would be pressed toward the cavity of the mouth. In front teeth he seldem left a shoulder, usually left the surface somewhat like the mould-board of a plow. Foreign matter would glide off the surface better than if a shoulder were left.

Dr. Westcott said there were two specific questions on the subject under consideration. He would notice only the latter. Age must be considered. With children, he would wedge the teeth apart, and avoid filing approximate surfaces, if practicable. He would wedge, if the teeth were close together, so that he could file properly. In all delicate cases, he would pursue the same course; but, in *dirty* mouths, he would walk right in with the file, and file as long as he dared. As to the filed space between molars he would leave the wide end of the v outward or inward, as the position of the cavity might indicate. Sometimes he did not even run the file clear across the space between the teeth.

Dr. Taylor said he agreed mainly with the remarks of Drs. Fuller and Westcott. In that class of decay by which all the tooth substance is removed from the cavity, he would file, and also when the tooth, by its increased sensibility, showed a disposition to resist decay. He would file off, even the whole labial surface, if necessary; and then, if the mouth were kept healthy, the teeth *would* last. When a molar and bicuspid were decayed on their adjacent approximate surfaces, he would cut the decay from the one and file the other.

Dr. FORBES said that in superficial decay he does n't file, and never did. He told the patient that the tooth would soon need attention, and that he *must* have it attended to in due time, or it would be lost. He preferred to trust the patient's care, rather than the file. He remarked that, as early as 1820, it was fashionable to file front teeth, to separate them, for sake of appearance, and that such teeth usually decayed.

Dr. W. B. ROBERTS said that, like Dr. Forbes, he lets superficial decay alone till it is deep enough to fill. In filing teeth, he aimed to leave the tooth as nearly in its natural shape as possible. In separating teeth, he preferred wedging to filing, when practicable.

Dr. WEEKS said that he once had strong prejudices against the file, but now uses it freely. He wedges, however, when practicable.

Dr. ALLEN said the file is a valuable instrument; but it must not be used indiscriminately. For superficial decay, he would file and burnish. He had seen filed surfaces remain sound for twenty years.

Dr. VANDEVOORT said that he found filing more successful in black decay, than in other varieties.

Dr. WILSON wished to know how Dr. Forbes gets along without the file, in superficial decay.

Dr. FORBES explained that he considered the tooth safer, by throwing the responsibility of its care on the patient, rather than by filing it, and giving the impression that it was thus rendered safe.

Dr. PERKINS said that when the labial surface of a front tooth was decayed, by removing the decay with a file or excavator, and then polishing the surface, it would last, *at least as long* as if the decay were not removed. He tried the experiment with two teeth thus decayed to about the same extent. One he filed and polished, the other he let remain as it was. Three years after, the filed tooth was good, and the other required filling.

Dr. Butler would not file, expecting that decay would thereby be arrested, except on anterior, or other favorable surfaces. If a filed surface was kept clean, till consolidation takes place, he regarded the tooth as comparatively safe.

Dr. Ambler said it was not the proper, but the injudicious use of the file that gave rise to prejudices against it. His views on the file were directly opposed to those of Dr. Forbes.

[Some good, sharp jokes were passed between Dr. A. and Dr. F. on the subject, but as we do not report the fun, the reader must go and hear for himself next time. W.]

Dr. Solyman Brown, of New York, was heard at some length in regard to the Biographies of Dentists, which he proposes to publish.

On motion of Dr. John Allen, it was resolved that this Convention is glad to learn that Dr. Brown contemplates the publication of such a work.

Pending this subject, a motion was made which seemed to be unacceptable, and the mover asked leave to withdraw it, which was granted by unanimous consent. Immediately a member offered a resolution the same in substance as that withdrawn. The chair decided this to be not in order. The mover appealed, and the chair was heartily sustained.

IV. *Filling Teeth.*

Dr. Perine exhibited an instrument for compressing the sublingual ducts. The instrument is the invention of Dr. Hawes, was manufactured by J. D. Chevalier, and will, doubtless, be kept for sale at all the Dental Depots.

Dr. Franklin recommended a section of an India rubber ball, placed between the teeth and cheek, to compress the perotid duct. The outlet of the duct should be covered with blotting or bibulous paper, and the convex surface of the rubber section placed upon it.

Dr. Ambler spoke of a mode of fang filling, which he practiced when cheapness was necessary. He fills the apex of the fang with gold, the body of the canal with gutta percha, put a cap of gold over this, and fills the cavity of decay with gold.

Dr. STRICKLAND stated that for a long time he had kept ready drawn, pure gold wire for filling fangs. He formed the wire according to the size of the instrument used in cleaning the canal, and then forced it up to the apex. More than twenty years ago he adopted the theory that, if the foramen was thoroughly closed, it mattered but little whether the canal was filled or not.

Dr. FORBES said that, in America, the servant girl *would have* as good work in her mouth as her mistress. He thought that to study how to do cheap work had a tendency to introduce bad work.

The work of filling he would consider under five divisions; 1st, The preparation of the cavity. 2d, The preparation of the gold. 3d, Preparing the mouth. 4th, Filling the tooth. 5th, Finishing.

1. He would take an instrument so large that it would not enter the cavity, and remove all superficial discoloration. He would break down the borders till the walls of the cavity were perpendicular. He would cut down to the bottom, with his favorite gouge instruments. Then he would bevel, or countersink, the mouth of the cavity, as if for a screw head.

2. Cut a book of No. 4 foil, book and all, fold into strips of eight thicknesses, make cylinders of these strips, by laying each strip on a cushion and rolling it on a broach.

3. The only difficulty in preparing the mouth is with the under teeth. He would surround the tooth with a piece of muslin, or a napkin, and support it with his fingers.

4. Suppose the cavity to be three lines in diameter, and the same in depth. He would take a cylinder, having the same diameter, but long enough to project a line out of the cavity when standing on its bottom. With a flat instrument, he would press this cylinder firmly to one side. The cavity would thus be about half filled. The remaining half he would fill part way up, as it would be difficult to get a slim cylinder

to go entirely to the bottom. With short cylinders, he would fill the remainder of the cavity. With a pointed instrument he would pierce the surface of the plug, where practicable, and fill in with adhesive gold.

5. He would finish in the usual way.

Dr. CLARK, of Georgia, formerly used adhesive, but now prefers non-adhesive foil. In the South, on account of excessive perspiration, it was important that the fingers touch the foil as little as possible. He usually fills front teeth with strips, and the others mostly with cylinders. He exhibited a very convenient apparatus for folding foil into strips of any desired width. The apparatus consists of a pair of ivory rulers, beveled to a thin edge at one side, and left thick at the other. The foil is laid on a flat surface, one of the rulers is laid on it, and the thin edge of the other is passed under it. By passing the one toward the other ruler, the free part of the foil is folded over it. The process is repeated till the strip is as narrow as is desired.

Dr. ROBERTS reported a case of an upper central, with one corner broken away, which had been filled with amalgam. Inflammation and death of the pulp resulted. He removed the amalgam, cleaned out the canal, drilled through the apex, and injected the canal with solutions of nitrate of silver. When restored to health, he inserted a platinum wire into the canal, letting it project so as to support the gold used in building out the corner, to restore the shape of the tooth. The case is now doing well.

The order of business, by common consent, was now temporarily suspended, and Dr. Frank. Fuller moved that the Treasurer be instructed to pay to Dr. Potter $154 20, being the balance of his expenses in defending a suit for infringement of what this Convention regarded as a spurious patent. After some explanatory remarks, the motion was carried unanimously.

Dr. FORBES, resuming the discussion, said that in filling fangs, he used wire, feathered the end of it, wrapped it with foil, and drove it "home."

Dr. FRANK FULLER, in filling crown cavities, preferred to have them cone shaped—wider at the mouth than at the bottom. Taking square pieces of gold, he would then press them down in the middle, leaving the edges projecting. When the cavity was full, he would condense firmly, first the edges, then the entire surface. He was opposed to under cuts.

Dr. BRISTOL said that this class of cavities was easily managed; but cases occur in which it is impossible to have the orifices larger than the rest of the cavity. The cavity must sometimes be "under cut," and he would inquire if there was no successful method of filling such cavities. Such teeth would not admit of such powerful compression; and he did not see how Dr. Forbes successfully condensed such large cylinders as he described.

Dr. TAYLOR said it must be understood that there will be exceptions to any rule. In some cases he preferred to have the cavity larger within; and it was sometimes best to fill the under cuts first, and then finish as in plain cavities. He would let the first block, or cylinder, lie against a straight wall. There was no difficulty in condensing cylinders laterally, as it did not require much force to press parallel layers of foil against each other. The first block introduced should be so large that it will stay in place, when condensed.

Dr. BARKER said he agreed with the remarks made generally on this topic; but no difficult cases had been presented. None that a tyro could not do justice to. He would like to hear how difficult cases are to be treated, for example, spoon shaped cavities.

Dr. ATKINSON said this was altogether too important a subject to be fooled with. Definite rules were needed, and he would address himself to those who were now in the situation he once was. The most difficult case is where there is a strong predisposition to periosteal inflammation, as the tendency of this is to render the tooth a foreign substance. If the patient could bear the operation, he would clean out the canal, and fill to the apex. The canal might be cleansed, and the tooth filled the same day, unless it was desirable to bleach it. As a dressing for the canal he would use a thread, strong enough not to break, applying alternately, creosote and tincture of iodine.

He had been requested to give his views of the use of the mallet in filling teeth. The mallet, he said, was a powerful condensing instrument. He had used it in the earliest years of his practice, but abandoned it out of respect for *authority.* He had again taken it up out of respect for his own judgment and *conscience.* He had successfully filled frail teeth by using it that he could not so regulate the force as to fill without it.

In preparing cavities, when the enamel is under cut, or not strong, it was important to level, or counter sink the margins. And in filling with cylinders, he said, adhesive foil should not be used, as it would choke the cavity.

In reply to questions, he stated that if the canal was thoroughly clean, he did not care whether it was filled or not; and that his habit was to leave a pledget of cotton, saturated with creosote, high up in the canal and file over it.

It was now moved and carried that the final adjournment of this Convention take place at 12 M., to-morrow, and that it hold its next annual meeting at SARATOGA SPRINGS, the first Tuesday of August, 1860.

Adjourned till 9 A. M., to-morrow.

FOURTH DAY, AUGUST 5TH.

Dr. S. P. MILLER exhibited an electric apparatus for use in the extraction of teeth.

V. *Mechanical Dentistry.*

Dr. FRANKLIN expressed a high degree of dissatisfaction at the shortness of the time allotted to the consideration of this subject. It had not had a fair hearing in any meeting of the Convention, but had been crowded into a brief space, near the close of the meeting.

Dr. Peabody, through Dr. Chase, forwarded a paper detailing his method of making casts. This paper we have not a copy of, but as the same modes, substantially, have been described before, we hope no loss is sustained by its omission.

Dr. Dunn made some extended remarks on the porcelain base (Loomis' patent), and

Dr. Loomis read a paper on the same subject, but as they were *entirely* eulogistic, and not in any way explanatory, they will excuse their omission from our report.

Dr. Fuller, of Peekskill, described his mode of antagonizing teeth. He finishes the upper plate, then adjusts the lower bicuspids, to correspond with them, solders these on, and then arranges the remaining lower teeth by them.

Dr. Bailey thought the porcelain work was likely, in some cases, to make the lip too prominent.

Dr. Dunn thought the gum would be made thinner by using it, than the gum and plate combined, as in ordinary work.

Dr. Allen eulogized the "continuous gum" work, and then went on to state that, in mending it, he uses a more fusible body than the piece is composed of. In antagonizing, it was important to observe the law, that the superstructure must not overhang the base; it was, therefore, desirable to have the inner cusps meet first. He insisted on the importanee of artistic taste, in arranging artificial teeth, and maintained that weight was no objection to an artificial denture.

Dr. Goldey said that though weight might be no objection, yet patients do object to it. He thought that great weight in the lower set causes absorption of the ridge.

Dr. Roberts said that it was maintained, yesterday, that pressure on deciduous fangs does not cause absorption. Was it any more reasonable that pressure causes absorption of the alveolar ridge.

Dr. Butler thought that the process absorbs faster when a temporary plate is worn; and he accounted for it on the principle of pressure.

Dr. Roberts thought the absorption was less rapid, in such cases.

Dr. Chase inquired of Dr. Allen if he had not difficulty in continuous gum work, from the contraction of the gum body, in baking; and if he did not break the teeth, in re-adjusting the plate to the cast.

Dr. Allen replied that he forces the plate to the cast, after baking, and did not recollect of a case in which the teeth broke.

Dr. Chase described his method of trimming the plaster model so as to allow for contraction.

Dr. Franklin remarked that it ought to be generally known that plaster expands for five hours after it is mixed with water. Any one could try it by filling a glass bottle with it. He had seen the fit of a plate destroyed, by the expansion of the plaster, in making an antagonizing model. To obviate this, he would lay a fold of soft paper in the plate, before putting it in the plaster.

He recommended great care in melting zinc. It should be taken from the fire before the entire mass is melted, and stirred with a pine stick to prevent crystalization till it is ready to pour; and it should be used, for melting, only four or five times.

In baking continuous gum work, he said, if the teeth were set on their cutting edges, the plate would be less likely to spring.

The discussion of the sixth subject in the report was omitted.

VII. *Professional Intercourse.*

Dr. Wilson read a paper which will be published.

Dr. Taylor also read a paper, which will be published.

The time for final adjournment was extended till 1 P. M.; and "Miscellaneous Business" was taken up.

On motion of Dr. Fuller, the thanks of the Convention were tendered to the retiring officers, and also to Dr. Rogers, for his efficiency as a committee, in making the arrangements for this meeting.

On motion of Dr. Fuller, Dr. L. W. Rogers, the acting president, was appointed a Committee to make like arrangements, for the next meeting, at Saratoga.

Dr. TAFT exhibited a maxillary tumor, which had been removed from the mouth of a patient of Dr. Tefft. Time did not admit an examination of the tumor, or a history of the case.

Dr. DUNN explained his method of enlarging the models, so as to atone for shrinkage in baking the porcelain work. The description was illustrated with specimens, without which it would be difficult to give a clear description of the process.

Dr. PERINE exhibited Dr. Levett's patent atmospheric pressure plate. For a description of this, and any information concerning it, address Dr. Levett, New York.

Dr. FRANKLIN exhibited a cup for taking lower impressions in partial sets.

Dr. FORBES read the following paper from a Chemist of St. Louis, which explains itself:

Dr. ISAIAH FORBES.

Dear Sir:—With great pleasure I shall give you an account of the experiments we have been trying in order to find the composition of a new cement for the teeth. You remember that early last Spring I found a notice in some German scientific periodical of an excellent cement which had been sent from Paris to the dentists of Munich. Mr. Feichtinger of the latter place had analyzed it, and found it to be the oxychloride of zinc, discovered and described by Sorel, with some addition to improve its durability. We prepared it according to his communications, but could not succeed in getting a cement as we wanted it, and had, therefore, to try our own skill. After some fruitless experiments, our efforts were rewarded with success, and what is more than that, with your approval. It may be that we, perhaps, can improve the article, and I shall pay to it again some attention as soon as my new laboratory will be finished. The present cement consists of two materials, which, mixed together, produce a firm plastic mass.

No. 1. The powder consists of—

Freshly calcined oxide of zinc	9 parts.
Finely powdered borax	1 part.
Finely powdered silex	2 parts.

All mixed well together.

No. 2. The liquid is merely a concentrated solution of chloride of zinc in the smallest possible quantity of silicate of soda or soluble glass.

Respectfully, your most obedient servant,

ENNO SANDER.

On motion adjourned.

☞ The reporter intended to give a list, with description, of all the apparatus, instruments and appliances which were on exhibition at the Convention, but he found it to be wholly impracticable to do so. Some of these will be noticed in the *Register* hereafter.

Editorial.

THE FORMATION OF A NATIONAL SOCIETY.

The delegates appointed by the State and local Societies to meet at Niagara on the 3d ult., assembled at the appointed time. There were not much over half the delegates appointed present, but those who were there were good men and true, and were very unanimous as to the propriety and necessity of forming a National Association, that shall be thorough and effectual in its operations. So general was the opinion, that, without any hesitation, the initiatory steps were at once taken for the organization of a Society. Temporary officers were selected, and a committee appointed to draft a constitution. This was done, and the report presented to the meeting.—After some consideration of its provisions, it was referred back to the committee, with instructions to carefully revise and amend, if need be, and have it published through the Journals, within the next few months; and thus the profession will have ample opportunity to study its provisions. The final adoption will be at the next meeting, which will doubtless be done with great unanimity, as the draft presented is an excellent one, and all feel the importance of this organization. In addition to this, some work was laid out for the next meeting. Essayists were appointed, and their subjects designated, which are published in the proceedings. As they have one year in which to prepare this work, we expect it will be well done.

The meeting next year will consist of the same delegates, except where there are resignations. It would be well for the respective Societies to look a little to those delegates who were appointed, and did not attend, and either have some assurance that they will attend the next meeting, or appoint those who will. T.

FANG FILLING OR NO FANG FILLING.

This subject will, from time to time, receive our attention in the pages of the Register, as space will permit and occasion may require. We will only now, and merely for his gratification, refer to one of Prof. M'Quillen's objections to our mode of practice. In the first number of the "Cosmos" he tells us that if the fangs are not filled, "the pulp cavity (though perfectly dry before the operation was performed) will soon be filled with serum through the foramen at the extremity of the fang." He calls in the aid of the microscope to prove his position, and announces—"as the *experimentum crucis*"—the remarkable fact that a thoroughly water-soaked tooth weighs more than a thoroughly dry one. We expect it does; and we like his theory, and would believe it if we could, and we know of no reason why we can not, except that it has no foundation in fact.—We will give but one case *now* to show our friend that his theory will not hold good.

A bicuspid tooth was filled after our method, April 16th, 1845. In the summer of 1853, the crown of the tooth was partially broken away, so that it became necessary to remove the filling, and refill. The canal was as dry as the powder of Cromwell's soldiers.

W.

THE "COSMOS"

Has made its appearance. Not Humboldt's, good reader, but a real, genuine, North American Cosmos of our own. We refer to the "Dental Cosmos" of Messrs. Jones & White, and call it ***our own,*** because it is devoted to the interests of the great profession to which *we* belong.

The "Cosmos," as a monthly, succeeds the "News-Letter" as a quarterly, and makes a fine appearance, and is well filled with interesting matter. We expect in future numbers of the Register to have more room to notice the Cosmos, and will likely draw on it occasionally for our select, or review department. We like the Cosmos, and so do its publishers,—and so do its editors—most ardently we infer, as their enthusiasm on the subject *almost* runs away with their modesty. The publishers brag on the editors—one at a time, and the editors, with a single exception, brag on the publishers; and if we had room, we would brag on the whole of them, in real earnest; for they will all do to bet on, singly or combined. We wish the whole of them abundant success, and hope they will, according to promise, make the "Cosmos" more useful and successful than any journal that has yet preceded it in our country, and better than the Register—if they can. W.

REPORT OF DISCUSSIONS.

In our report of the proceedings of the Convention at Niagara, we have endeavored to give that which would instruct—not that which was merely amusing. Some wit was displayed; but our readers can find just as genuine humor in a comic almanac or a cheap newspaper. Wit and humor enliven a public meeting, and often give point to the proceedings; but our space can be better occupied than in the publication of humorous sayings. The "laughter" and "applause" we have omitted, as usual. Our readers know as well what to applaud as the Convention did.

We believe that all the Journals had their "own reporters" at the Convention, and this will, doubtless, be found the best and most satisfactory way. Much time was uselessly spent with reference to the obtaining of an "official report," to be published in all the Journals. The brethren who figured in this movement seemed to forget that the Journals are private property, and might not wish to encumber their pages with such a report as the Convention might furnish. As long as the Convention remains a mere mass meeting, it has but little need of official reports. W.

THE TRIP TO NIAGARA.

Nothing new can be said about railroads, and yet we feel like speaking a good word for that universal favorite, the LITTLE MIAMI. "We ought to praise the bridge that carries us safely over," (an original saying of ours,) and how much more ought we, then, to speak favorably of the road (bridges and all) that not only carries us safely, but snugly and quickly, over the smoothest possible track, in the most comfortable cars! We never feel like we were away from home, while in hearing of the whistle of this pioneer road; and our pride was more than once gratified in hearing our fellow-travelers express their surprise at the smoothness of the track.

Now, readers, if you want a pleasant and safe ride, just get tickets for Buffalo, via the Little Miami Railroad, and pay a visit to Niagara Falls; and you will not need our advice to induce you to go again. If not practicable sooner, we will hope to meet many of you on this route, on our way to the next Convention, at Saratoga.

Of Niagara itself, we have not one word to say. W.

CRYSTAL TIN.

Some time ago a person, whose name I had never heard before, and can not remember since, called upon me, and proposed to give a formula for the preparation of crystal tin. The idea seemed a novel one, and perhaps from novelty, as much as from anything else, I obtained his formula. The experiments since lead me to think it a good thing, valuable in cases where tin is used for filling teeth. It is designed to take the place of tin foil. It is prepared as follows:

Take chemically pure hydrochloric acid, and dissolve tin (tin foil is best) in it till a saturated solution is obtained. This may be done speedily by heating the acid to a boiling point, or the same thing will be accomplished with the acid cold, in a few hours ; it is then muriate of tin. It is then poured into a clean vessel, and about an equal quantity of pure rain, or distilled water, added, then a clean, bright strip of sheet zinc is plunged into the solution, the tin is immediately deposited upon the zinc in a state of crystalization ; when a coating of desirable thickness is deposited upon the zinc, they may both be removed together from the solution, and the crystal tin slipped off the zinc into pure water ; the tin should be thoroughly cleansed, and again placed in the solution, to receive another coating of tin. It should be taken out and re-inserted, till all the tin is precipitated from the solution. The character of the crystalization will be modified somewhat by the extent of the dilution of the solution, in the first place. The tin should be thoroughly washed in pure water till all traces of the acid are gone, or a few drops of aquæ ammonia may be added to the water, to neutralize the acid. It has been suggested that it would be desirable to have a portion of the acid remaining in the tin, for filling teeth in which there is no sensitive dentine ; upon this, however, we have no experience. We have put in a few fillings of crystal tin—it works beautifully, and makes firmer fillings than foil. It must be kept in water, or what is probably better, alcohol. We think it preferable to tin foil—it works easier, unites more perfectly, and is absolutely pure tin, if well prepared. Try it. T.

EXCHANGES—COOL.

In almost all cases we get along smoothly with our exchanges. Occasionally we find them missing, either through the neglect of the Editors, Publishers, or Postmasters (not the Editors), most probably through the inefficiency or carelessness of the latter. We regard our exchanges too highly to slight or neglect any of them.

In two instances where we have sent the Register, and requested an exchange, we have received such treatment as only those who live in high latitudes give. A case we recently had may serve as an example. We sent the Register to a flourishing Journal, having a popular name, with a request to exchange ; said Journal is published at two dollars per year.

Had the publishers merely said they did not wish to exchange, we should have deemed it all right, and should not have uttered a word, nor entertained one thought about the matter; for certainly we do not wish to exchange with those who do not desire it.

Now, instead of notifying us that they did not wish to exchange, they sent us a prospectus, to be inserted in the Register, worth $10 per year, with the very modest suggestion, that if we will insert it, and give an *Editorial notice,* we shall have the *privilege* (*gracious?*) of exchanging with said Journal. How condescending! Wonder if the proposer is thawed out yet—guess not, for this happened in *dog days*. Old Sol may peel away on that fellow, without there being any probability of a *sun-stroke.* This proposition, though not of the same character, reminds us of a proposed trade, in which a certain personage agreed to sell all the world, when he did not own a single foot of it.

We don't want any better refrigerator than Mr. Q., even this hot weather. When we can't do without the Q., we will send it $2.00, and not give it $10 worth of advertising, to obtain the glorious privilege of an exchange. T.

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☞The subject upon which Dr. M'Quillen proposes to prepare an essay, to be read before the National Dental Society in July next at Washington City, is "The Anatomy, Physiology and Pathology of the fifth pair of nerves."

This should have filled the blank after his name, in the Minutes, on pago 120.

* * *

FORGETFULNESS.—Most persons are habitually forgetful on the subject of subscriptions.—After a paper or journal has been regularly sent them for one, two, three or four years, and they are finally called upon to pay, they forget that they are subscribers; they forget that they received and read the Journal; they forget that it was of any benefit, although they may have made or saved hundreds of dollars by the valuable information in its pages, while they have forgotten from whence the information came, but with self-complacent vanity imagine that all they have and all they know is the original product of their own stupendous intellects.

Finally, they search the house, and discover that they have only one, two or three No's of each volume, and then declare they have received none other, FORGETTING that the Journal has been carelessly left where visitors, servants and children alike had access—some mislaid, some loaned or given away, some lost, and some destroyed. All these excuses and arguments are hatched up to escape paying the paltry sum they justly owe, and from which they have derived more benefit than could be procured by the investment of TEN TIMES the money in any other way. To the Dental periodical press are many of the ablest Dentists indebted for their success, while the Profession itself owes its ELEVATION chiefly to this INFLUENCE.

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DR. WILLSON'S ADDRESS.—The address of Dr. E. T. Willson, of Boston, delivered before the Dental Convention at Niagara on the 5th of August, came to hand too late for the present No. of the Register. It will appear in the next.

There was a great desire expressed in the Convention that it should be put in such a form that it could be used by practitioners for distribution to their patients. In accordance with this indication, we have placed the copy in the hands of the printer, and it will be issued in a few days in convenient pamphlet form. It may be obtained at all the Dental Depots. It is a good thing, and should be in the hands of every one. T.

THE

DENTAL REGISTER OF THE WEST.

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PROFESSIONAL INTERCOURSE.

A PAPER READ BEFORE THE AMERICAN DENTAL CONVENTION.

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Mr. President:—In the consideration of this subject we might ask, What is there in professional intercourse which should distinguish it, from that intercourse which should mark the conduct of one gentleman towards another? Every gentleman has a right to expect, and may demand that respect and deference which the proprieties of life and the social customs of society impose.

The very term *gentleman* means a great deal: it is composed of two words, GENTLE, mild, not refractory, courteous, kind, considerate, obliging, not overbearing, or stormy, tyrannical, arbitrary, dogmatical; MAN, the masculine of the human race, a being endowed with reason, judgment, wisdom, skill. Every man should be, a *noble man* the "noblest work of God," in all the amenities of life, he constantly gives what he feels in his nature he should receive. In all his acts, integrity, a strict regard to truth, and the right of others, mark him as the gentleman. But the very question pre-supposes something additional to all this, and yet not much can be added; for we take it for granted that no member of a profession, like our own, can be known and recognized as a brother, without a clear and just title to that of a *gentleman.* In all professions, however, there are direct professional obligations, which do not exist in the ordinary intercourse of life; 'tis true these are few, and might, perhaps, with strict propriety be classed with the others. Allow me to draw attention to one or two.

There is a duty one owes his profession, and in the exercise of this duty he has a double intercourse imposed upon him,—that with the different members of the profession, and that with the public. Every man in assuming a liberal profession, imposes upon himself a two-fold obligation—first, a duty to that particular department of science, and second, a duty to the public who, of a right, look to that science for benefit. We are *mere recipients for the transmission of knowledge.* All the little details of all the great facts or principles which make up our quantum of knowledge are not our own, but belong to the profession we have chosen.

It is this great principle which distinguishes all the liberal professions; throw aside this principle, and we can not, we dare not claim that distinction. Every intelligent and liberal professional man would laugh at us for such an assumption. We must come on to this broad platform, great, grand and benificent, "Freely we have received, freely give."

But let us analyze this question a little closer. We have chosen a profession, the object and aim of which is to arrest and repair the ravages of disease: a *noble profession* it is. Take all the arcana of human knowledge, and sift therefrom that which will most conduce to the happiness of our race, and medical science stands pre-eminently at the head. What is dental science but a speciality of medicine, which grasps in its embrace every principle on which that is based? Does medical science come to us rich in the lore of antiquity, and still made more rich by the great and good of our own age?

Does it come to us ladened with the trophies of the most self-sacrificing, untiring, and indefatigable benefactor of our race? Does it come with "healing on its wings," a balm for every wound in its hands, and tears of mercy in its eyes, and yet *we* refuse to contribute our mite to its onward march in the cause of humanity? Does not rather the terms of our enlistment demand, at our hands, every accession that we make, every additional fact in science we may glean to enrich her treasures, every ray of light we may eliminate by our research to impel her onward progress?

In this great conquest over disease, we are not left to consult our own self-aggrandisement. Each man *should feel* that above and overreaching all this, there is a nobler and a higher aim, an aim, which, while it brings competence and reward, stretches beyond, even to elevate and advance our profession itself. Every member of the profession should feel that to elevate dental science is to elevate himself.

That his honor, his reputation, his very manhood, what he *is*, and what he *is* to be, are wrapped up in his calling. What he owes to himself, this, and far more, he owes to his profession. He can not say with Cain, Am I my brother's keeper? for he has no right to degrade his brother's calling. He *may* claim the right to disfranchise himself, but he has no right to disfranchise his brother or his profession.

Let it then be remembered, that he who seeks isolation from responsibility, who would throw off all the weighty obligations, which an intelligent and liberal profession impose, must step aside from its duties; nay, he must seek none of its honors, none of its rewards, not even its mantle as a winding-sheet.

This one fact is then self-evident, that it is the first great duty of every member of the profession to seek its highest elevation, to stand up for its reputation. We would take no narrow view of professional intercourse, but we would have our intercourse high-minded, liberal and intelligent: it means far more than the every day interviews with our brethren.

We would commune and hold intercourse with our science every day of our life. We would seek her requirements, consult her good. We would lay as tributaries at her feet every department of knowledge which could aid in her progress.

It is the duty, then, of every member of the profession to see that the standard of dental attainments be placed as high as possible; that, not only should his own progress in knowledge keep pace with the demands of the science, but that every new candidate for her honors should not pass the portal of her sanctuary, until prepared to meet the responsibilities he assumes. There is no need of mincing the matter; the profession as it is, has *now* in its own hands the future repute and character of dental science. We can not in honor recede, we must in honor go on. A survey of study may frighten many from the field, who but for this would enter; yet the brave will enter, and achieve most honor, where the timid hesitate and draw back. It should be known, the sooner the better, that it is no child's play to pass through the various studies required for the dental practitioner. Take all you dare, from the regular study of medicine, and then add the absolutely requisite for the dental student, and the difference is small. Dentistry demands much that medicine may do without. It is the duty, then, of every member of the profession to do every thing in his power to elevate and advance the standard of dental attainment. He comes down to the ordinary intercourse of life, and as he may meet his brethren, it is not a turn of the key on this thought, a locking up in his vault, an important principle he may wish to unravel at some future day himself—but his pride of the profession, seeks the first aid he may get, that the principle may be tested. How many important improvements are held back, for the want of united effort? How many wonderful discoveries are working sore and sad disappointments to the inventors, because covered up from the tests which science might and would apply, if revealed?

Every professional man *should* feel, that every new thing, whether in principle or practice, can not be firmly established, until it has passed the ordeal of the profession itself.

Time with her "relentless *tooth*," and experience with her sad realities, make terrible havoc sometimes among our most cherished air castles.

Let but our professional zeal outstrip our selfish prudence, and the rapid advance in our science would startle and amaze the most incredulous.

The vast amount of useless research, if guided aright by the known principles of science would accomplish much in the way of improvement. The time, talent and skill which have been expended on the idea of a perpetual motion, might have renovated every mechanical and artistic trade in the world; thousands of times it has been accomplished but for one *little* thing, yet that *little* thing is as the mountain itself, it can not be moved.

In our professional intercourse, there is one duty we owe to the profession and the public at large, which demands more than a mere passing notice; this is the sentiments we may inculcate in relation to dental education. Time was, when many honestly thought, that a few weeks, or months at most, was time sufficient to master all the details of dental practice; sad experience has taught us a lesson on this subject; times have changed, public sentiment has changed, and if dental science has not changed, it has progressed. Things have changed about our office, things have changed in our laboratory, and if we change not, over our doors will be written, "OLD FOGY." It becomes every member of the profession to see to it, that no student leaves his office without thorough preparation, not only in the mechanical detail of artistic dentistry, but the general principles of medical science on which the profession can alone stand. Long observation has convinced us that theoretical principles neglected before practice begins, but seldom receive much attention thereafter, while mechanical skill, being an every day necessity, must be attended to.

The demands of life, or the glitter of the fee itself, closes on the perspective, and hides all but the daily duties of the man. There is a period of life which emphatically belongs to pupilage, and we doubt not, that observation will convince any one, that if in the hurry to assume the responsibilities of practice, this is neglected or cut short, the individual is injured professionally as well as pecuniarily. There are laws which work out certain results, almost as surely in morals and in the practical details of life, as in astronomy itself. These laws appear to be almost immutable, none of us imbibe a great amount of professional knowledge by intuition. It comes to us through two channels—the brain and the hands—the latter are an indispensable requisite to the dental practitioner, they need a great deal of careful education, but still they can't say to the brain, "I have no need of thee."

The brain must be the moving power; neglect this great propelling principle, the motive force which directs and controls every manipulation of our art, and you might as well place instruments in the hands of wood-choppers.

We have individuals enough now—"whether in the body or out of the body, we cannot tell"—who have been moving around for years, catching an item here, and picking up one there, to fill all the dental colleges in our land. There is no want of *hands*, we can not say of *brains*, but they can't get both to work well together, they will not agree; the hands can not do what the brain wills, and the poor brain has never been taught to will aright.

Mr. PRESIDENT, Are not these stubborn facts? We appeal to the good sense of every member of this Convention if these things are not so. Shall we be told, then, that there is no remedy? there is a remedy, and *you* my brother, and *you*, and *you*,—yes *we* have this remedy in our hands; let us have the moral courage to use it.

We do not propose the adoption of any resolution by this Convention on this subject, we know that resolutions thus passed would be of no avail, unless backed by the firm resolve of every member to carry them out. We do, however, hope to enlist your feelings so in this matter, that your acts will be far more effective than any resolutions.

We presume that if the question were now asked, what is the lowest term at which pupilage should be placed, the unanimous response would be, not less than two or three years; if so, carry it out, and let the profession through your intercourse with it, know your views on this subject, and the influence will be felt. We do not come before you with this subject in behalf of our Dental Colleges, yet if time, labor and money expended, would entitle any one to press such a subject, we might: but we do come with this subject, appealing to the good sense and judgment of every member of the profession, that they may meet its requirements in the light of true science.

Make of our profession a *trade*, and we leave it to-morow; not but that trades are respectable, and equally honorable, but that science would receive a wound we have not the courage to inflict.

Mr. PRESIDENT. In conclusion, we would not advocate that kind of professional intercourse which would sustain the disreputable conduct of a brother; in doing this we might and would degrade the profession itself. We would go as far as any man, as far as honor bright would allow, to sustain the right; yet we should all feel, that to go farther would deserve the execration of every true friend of the profession.

To be honest, we must be just. True professional courtesy requires that wherever we can, we should commend the operations of another; there is a vast amount of indiscretion on this subject, operations are examined years after they have been performed; the carelessness of the patient, or the progress of disease has changed the condition of the mouth very much, and because the operation has not proved as durable as desired, the whole is condemned. We can not tell all the circumstances of the case; there may have been difficulties in the way, the patient with the then sensitive condition of the teeth, may have been unable to endure all the pain necessary for the most thorough work.

What may prove a defective operation, may not always be for want of skill in the operator. Duty to our patient requires that we should do the very best we can, under the circumstances, for his good. If the case is such that no good can be accomplished, refuse at once to operate.

From our peculiar locality—being about in the centre of the world, and half way between the east and the west, the north and the south, we see almost daily, operations from under the hands of the most skilled in the world, yet time and circumstances have so changed the condition of things, that charity's mantle must be thrown over the whole. The fact is, there is not after all much perfection in this world, we like to see it, and are willing to praise it at any time, it is very mortifying, however, to find we have *crowed* too soon.

Mr. PRESIDENT, These younger practitioners do not know what professional intercourse *used to be.* But fear not, ye time-honored fathers, we draw over the past the curtain of oblivion, we have cast off the shackles, forged and riveted on in the dark ages, we now stand up in our professional freedom, exultant in victory, and shall ever rally to our cause the intelligent, the liberal, the noble and the brave, who battle for the advance of our science.

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DENTAL QUACKERY.

A PAPER READ BEFORE THE AMERICAN DENTAL CONVENTION.

BY E. T. WILSON, M. D. D. D. S.

THE prevalence of quackery in all departments of medical science, its rapid growth under the new systems evolved during the present century, and its novel and alarming ramifications in that branch of practice whose professors we are, affords a theme quite extensive enough for the present paper, and one that yields, even to the most ordinary observer, too many illustrations to present any difficulty except that of selection.

It cannot be denied that it is the duty of all regular practitioners, however onerous, unpleasant, or, in a pecuniary sense, unprofitable, that duty may appear to be, to wage incessant war against *irregularism*, or *quackery.* Every honorable man, in whatever station of life, should leave his testimony against dishonesty, and this is, in a peculiar sense, the duty of those to whom society entrusts its health and happiness.

It is a portion, and no small portion, of the pledge tacitly made by the youthful physician, surgeon or dentist, when he receives at the hands of the faculty a diploma of skill and learning, "that he will discountenance, and as far as in him lies, put down all who would pursue his road without the necessary qualifications." Admitted that it may embroil him in unpleasant altercations, strifes and bickerings;—admitted that the masses may not always distinguish between the philosopher, battling for a principle, and the empiric battling for a fee;—the great interests of the science entrusted to his keeping, the dignity of wisdom and the future progress towards perfection of the profession he has chosen, demand of him that he will make no compromise with false professors, nor cease "to cry aloud and spare not," while unworthy Samaritans are within the temple gates. Under this impression I offer a few thoughts upon the progress of Dental Quackery, or Irregularism, with some suggestion as to the readiest method of opposing it. To the modern method of procuring business by means of advertising—a method so diametrically opposed to that of former times—much, very much of the quackery of the present day must be attributed. In the times which some of us remember, it was thought equally derogatory to the dentist as to the physician to advertise his profession. No long list of specified prices, from the "pulling of a tooth" to the "extracting of a fang," from "inserting a simple plug" to "the more difficult cases of the art," was considered professional. No curiously decorated signs—no bleached dental organisms, grinning horribly in glass cases, and exposed to the view of passers by—no unfraternal depreciation of fees, formed a portion of the Dentist's skill or duties. The Surgeon Dentist was supposed to be skillful and learned, and needed none of these appliances; he was supposed to be a gentleman and above their use. When his preparations for the practice of his art were made, he sat down in the locality he had chosen, and then, amidst his books and instruments, awaited in dignified silence that custom which, however slow, is always certain to the worthy professor. But now how different! The dental practitioner must study as well the structure of human brains as of human teeth. He must apply himself to the knowledge of mankind. It is allotted to him to find the soft and pulpy places of men's heads as well as their jaws. He must manufacture gas as well as teeth. The wax must be applied no less to idiosyncracies than to gums. If he is the fortunate possessor of a purse containing anything of value, it must be largely bled to pay the job printer, the sign painter, the card engraver. His time, so necessary to the study of his profession, must go in a generous proportion to the conventionalities of society; that, by art of many smirks and bows and hand-grips, he may win some customers. He is, in fact, a sort of curb-stone dentist. His mode of operating is superior to that of others. His pockets are well filled with evidences of his superior skill in the shape of sundry teeth, exhibiting a well filled crown or fang, and, possibly, an entire artificial denture may appear, to show his new invention and adaptation, which may be to him and to the heirs of his loins after him a dental immortality. Thus shall he live admired and die regretted.

Seriously, this is what the modern system of advertising has done for the dental profession, and I may say, for all other professions which have a scientific basis,—it has given to *publicity* that which is due to merit.

Before leaving this part of the subject I cannot forbear calling your attention to the wonderful rapidity with which men's characters increase under the influence of this system. Persons whose knowledge of teeth was confined, a few years since, to a few badly cleansed pegs in their own mouths, are enabled to wax great, like Jonah's gourd, in that little period, and count their patients by thousands. Formerly the growth, as well of the quack as the man of science, was a slow affair,—he must needs prove himself a man,—now he needs only prove himself an ingenious and a generous advertiser. Is it strange, then, that the patient and modest practitioner, whose share of public patronage has been earned by real merit, whose conscience has guided each instrument, and followed each filling,—is it strange that he should eye with disfavor those who have secured popularity by such unprofessional means.

If I were called upon to give the characteristics of an irregular dentist, in contradistinction to the opposite class, I would note two points of distinction. First, a disposition to follow the dictates of popularity rather than conscience; second, a disposition to win the way by means other than those of experience and merit. The evidences of the former are seen in a willingness to humor the whims of patients, to perform operations of temporary value only, to seize upon every novelty of the day at the expense of sound work, and generally to make the street and the forum a part of the operating room. Teeth and their connections form a most complicated organism, of which but little is known by the masses. With many persons "the application of cold steel is the sovereign cure" for all the ails pertaining to the teeth, and in that one popular notion consists the whole art of dentistry. Few imagine the intricacies with which the science abounds, and still fewer will make any allowance for the perplexities with which the wisest of the profession finds himself surrounded in the management of many a painful and complicated case. The *professional* dentist who has the courage to tell his patient that the resources of his art are exhausted and that he must dismiss him, is a hero of a sort, alas! too rarely found. The Dentist who will boldly refuse to extract a tooth, whose throbbings are filling day and night with pain, is a hero, of a humbler pattern, perhaps, than Alexander, but nevertheless a hero. These observations lead us to this conclusion, that in the popular ignorance upon the subject of dentistry, it is no wonder that quackery thrives. It is no wonder that every city, town and village swarms with "Surgeon Dentists," so called, of the character such as I have described. There are various grades of empirics, and I should be pleased, for one, if we could sound in their ears the true definition of "quack," for of all professions I am inclined to believe that ours is as much in advance of others as the dog was when he went out to pursue a bear. "Quack," I believe, comes from a Teutonic word "quacken," and to "quack" means "to cry like a duck," that is, to make a great deal of noise; to brag loudly and to talk ostentatiously.

But we have this feathered Bobadil at an advantage. He cannot advertise in the newspapers; he cannot condense his professional acquirements within an almanac; and, as his friends and fellow-citizens have no teeth to extract, he cannot exhibit his extraordinary talents by setting up as a dentist. So he is confined to his private puddle, where I am uncharitable enough to wish we could keep some of his featherless imitators, upon a low diet of their own amalgams. For, gentlemen, I am vain enough to believe that *our* quacks are more mischievous, more ignorant and more impudent than any others in the world. I will back almost any one of the noble army of self-styled "dentists," with his puffs about painless operations,—with his Golgotha of a show-case,—with his pocket full of stumps which he never extracted,—with his dentrifice, called by a hard Greek name, and which will probably extract teeth much faster than he can,—with his circulars, illustrated by magnified photographs of insects which are supposed to reside in and about the dental organism, until this scientific gentleman gives them notice to quit,—with his sliding scale of prices, always in accordance with the times,—I say I will back this miraculous person against quacks in the pulpit, quacks at the bar, in a word, quacks in general. I did intend to make an exception in favor of the scientific creatures who discover and dispense Vegetable Bitters, popularly supposed to be able to create an appetite under the ribs of death; but these gentlemen, it must be remembered, kindly alleviate the sufferings of those who have been deprived of the power of mastication, by taking away the desire or power to masticate at all: for if some of those unfortunate patients who have yielded to the seductions of puffs and powders and cheap artificial dentures, with a base of cheaper plate, were only as hungry as their mouths are hideous, I do not know which would be the most uncomfortable—their jaws or their stomachs. I think we may, without suspicion of maudlin sympathy, sincerely pity the sorrows of the person, whether old or young, who may have fallen into the hands of the individual whose acquirements I am sketching, or some more brilliant flourisher of the forceps who lives not by *skinning* his teeth, but by *skinning* the teeth of other people,—of some renovator, who gets his patients into a terrible scrape,—of some noisy blower of his own trumpet, who first fills the ears of his victims with words, and then *stuffs* their teeth with something a great deal worse, so that life for them can have no charms, except those which are purchased at the cost of perpetual and expensive etherization.

I do pity these unfortunates. I am not much given to the melting mood, except in my laboratory; but when I meet one of these victims, my sympathies are aroused in consequence of the delusion under which they have been laboring,—that they did not come to you or I, and then that he or she went to the other man, who undoubtedly told him that we were extortioners, charlatans, and clumsy fellows, because we do not furnish the community with almanacs; do not inform the world of our prodigious talents, through the medium of the newspapers; do not demand a certificate of skill every time we extract a tooth; do not keep a museum of our handiwork; nor do we make venerable teeth sound by the use of the "Odontalgic Rejuvenator." I suppose, gentlemen, upon the whole, it is much easier and much more profitable to be a quack.

I have known men who could scarcely tell the superior maxillary nerve from a chalk line, which they had been accustomed to use in their manipulations upon ship timber; neither could they tell the inferior dental nerve from a rope which should have encircled their necks. They could possibly distinguish between a *dental* and *copaiva* capsule, but did not know whether nature gives us thirty-two teeth or thirty-seven and a half; who could not distinguish between a cuspid and a molar tooth, and who supposed that the incisors were the small bones of the ear; who thought that great men have eight wisdom teeth,—men of ordinary talents five, and fools like themselves none at all. I have known such fellows to make money, dupes and fame, while gentlemen of worth, and scholarship and skill were barely making a living. The practitioner who makes a noise,—who has seven square feet of door-plate, two night-bells, one knocker, and a speaking tube,—who has certificates of his skill from presidents and parsons and governors and senators, who never saw him, and never want to see him,—who is mentioned in the newspapers as having on Thursday last performed a wonderful operation upon one of our first citizens,—amputating the *os hyoides*, excising the *parotid* gland, sawing out two-thirds of the lower jaw, and removing six ounces of tumor from the pharynx, after which the patient went home and ate a hearty dinner; that is the practitioner for the people's money. He scrapes, and pulls and excavates; he has his windows open that passers-by may smell ether, and listen to the howls of his victims; he becomes famous for giving the greatest amount of pain for the smallest amount of money;

he works cheaply, talks cheaply, and is altogether a cheap person. When he is exposed, he cries out that he is persecuted; and he is all along sure that the time will come when people will be weary of exposing him. He goes on, however, puffing himself. He informs a world, suffering from toothache, that it can be cured in one-sixtieth of a second, and under no possible circumstances can it return. Price 12½ cents. Fangs extracted for 25 cents. Simple *soft* fillings inserted for two shillings; *amalgam* fillings, $1.00; gold filling, ditto. A small advance will be expected on all compound and internal fillings. He hangs an enormous and gilded tooth over his door, but forgets to add the well known inscription: "Leave hope behind you, you who enter here;" for if he had any caution to utter, it would be, "Don't forget to remember your pocket-books."

I dare say his victims are good people; but if their teeth are hard to extract, they are themselves susceptible of very soft influences; and I do not think it would do our friend any harm if he consulted his books, if he has any, before consulting the sign painter, and practice on the craniums of the departed, before he half killed the living. Something more is required in embracing our profession than a small stock of foil, an operating chair and a spittoon, half a pint of teeth, a lathe, a few ivory-handled pluggers, and the last new compound *screw* forcep, with a treatise on Dental Surgery on the side-table, and a bottle of ether on the shelf. I know that a first rate chair is very imposing, and that a case of shining instruments, which some take so much pride in displaying, has a thrilling effect upon the nerves of the patient. But I confess I never see a fine case of instruments, clean, bright, sharp and well arranged, without putting up a silent prayer that the same Providence which usually keeps little boys with their pockets full of matches from gunpowder, will interpose to preserve the whole collection from the hands of a blunderer.

You may have heard of the man who called himself a surgeon, because he owned a beautiful case of amputating instruments, and did not discover his error until he was prosecuted for cutting off the *wrong leg*. I do not care how fine a fiddle a man has,—its value does not enable him to rival Paganinni or Ole Bull.

The life and soul of a quack business is ostentation. A modest man will plant himself upon his merits, and will wait for the world to come to him; and I believe I am safe in saying that, as a general rule, the most meritorious man will be found to be the most modest. It is ignorance, and pretension, and assumption, and wild and headstrong arrogance which seeks by adventitious arts to atone for gross deficiencies; which attempts, by bluster and display, to blind society to professional incompetency. It is the want of dexterity and skill which impels a practitioner to tell what he can do, instead of doing it silently and surely, and trusting to his handiwork as the voucher for his ability.

A charlatan's horn may be very long, and its voice very loud, and his wind as endless as a New England north-easter, but he must have brains as well as lungs, if he would produce music; and perhaps he will do quite as well if he does not always make his own perfections the theme of his performances. But it is more sensible,—it will be more agreeable to our fellow-creatures, and we shall be more likely to make real advances in our profession, if we keep tolerably quiet, relying upon doing well whatever our hands may find to do. One patient, skillfully and permanently relieved, becomes your friend and patient forever after; and you will probably fill, extract and set for his whole family,—for his children, and if you live long enough, for his grand-children, to say nothing of the collateral advantage which you will derive from the smiles of his uncles, aunts and cousins. The best advertisement a dentist can have is a thorough piece of work, for his patient cannot smile or speak, cannot eat, and cannot even yawn without advertising him in the best, and puffing him in the only tolerable way. As for his patients, private and personal gratitude, there will be no end of it. When he eats his Thanksgiving dinner, when he speaks in the pulpit, the bar and the forum, or in any other public place, he sits down or rises only to call you blessed. The gratitude of such a friend is worth having, whether he pays his bill without growling, or does not pay it at all.

I am not sure that quackery has not flourished most formidably since the quacks ceased to be peripatetic and betook themselves to local habitations; I care not where; in Five Points or on the Fifth Avenue, in North street or under the shadow of the Massachusetts state-house. To be sure, an empiric is an empiric, whether he hides himself in a dingy den, with a private entrance for the modest, or puts out a shingle longer than himself in some more reputable locality. But a quack, with a local status, who catches one dupe, sometimes contrives to catch a great many before he finally explodes and vanishes and makes room for another ignoramus and blunderer, who will, in turn, make room for a third.

The dentist who attends militia musters and cattle shows; whose stock in trade consists of a bottle of colored acid and a bit of leather, and who cleans teeth in ten seconds, undoubtedly humbugs the bumpkins, but he does not cheat the best people, because they are not there. But put him, with his fluent tongue, his inexhaustible impudence and his sublime disregard of truth and morality, in some fashionable quarter of a great city, and he will be pretty sure to do irreparable injury to many teeth which a conscientious practitioner is interested in preserving.

It is all well enough to talk about intelligence, but I have known very intelligent people who took pecks of patent pills; swallowed gallons of panaceas, drenched themselves with oceans of infallible tinctures, wore magnetic rings, encased themselves in magnetic plasters, tortured themselves with galvanic batteries, and, finally, physicked themselves into another, and we hope a better land. I have known clergymen, (at least, men calling themselves such,) who certified to the almost incredible virtues of some concentrated bottle of fluid dirtiness,—who declared, over their own sign-manual, that they had been cured of dyspepsia, that one of their parishioners had been cured of a number of Job's comforters, another of typhoid fever, and a third of neuralgia, by the same precious compound.

These good men—I admit there are some honorable exceptions to the rule—have a tender regard for, and will puff almost any quack who has discovered a new dentifrice, a pretended painless method of operation, or some amalgam which put into the cavity of a tooth immediately turns to dentine; in return for which this grateful quack is ready to depopulate their own mouths and the mouths of their families, without the aggravation of a bill.

I suppose that I shall not get much credit for disinterestedness in declaring, but I do solemnly declare that they who thus play upon public credulity in one thing are not to be trusted in *anything.* I should be sorry to have any woman whom I loved or respected at the mercy of their coarse natures and their ether, chloroform or brandy. I would beseech the pure and good to shun them; to avoid them with a closer vigilance; since no wild outcry of anguish or shame can, after their infernal tampering, summon the good or the generous to the rescue of outraged honor. I am not speaking of what may be,—I am making plain allusions to what has been,—to facts. I do not know that such things should astonish us, for a man who will do *anything* for lucre will do *anything* for lust, if his base inclinations are in that lowest and most repulsive of all possible directions.

To conclude with a word or plan whereby unprofessional dentistry can be put down. This, you will admit, is a most difficult theme.

It has been said by a humorist of the last century that,

> "Oftimes the pleasure is as great
> Of being cheated as to cheat,"

and, while the world is constituted as it is, it were useless to expect that quackery, in any department of life, can be extirpated. Yet something may be done, both to check it and counteract its evils. I would suggest,—

First,—The highest possible standard of scientific attainment in our profession. To depreciate others we must appreciate ourselves. To exhibit quackery in its native hideousness to the world, we must remove ourselves as high as possible by professional acquirements from quackery, and make the space between us evident to the humblest mind. Were I at liberty to name them, I could designate from those around me, individual cases that might serve as patterns in all that is earnest, zealous and conscientious in dentistry.

Secondly,—A careful avoidance of any of the unprofessional arts to which I have alluded, and a recurrence to the primitive model of our fathers. Whosoever descends into the arena of popular competition will never rise to a dignified seat with the elders of our vocation.

Third,—Positive refusal to unite in consultation, or in any other manner associate with empirical practitioners.

I must remind you, as well as myself, of the great responsibilities which our profession entails. If dentistry be a distinct branch of medical science, the best medical men will agree with me in pronouncing it one not easily mastered; demanding great anatomical and physiological acquirements, intelligence, diagnostical talent, close observation, a clear head and a ready and steady hand; most successfully embraced by the honest, the thoughtful and the progressive; of vast importance to the general health of the body and to the enjoyment of all our physical faculties. If studious men have devoted their lives and their minds to diseases of the eye or of the ear; if many great medical minds have been solely employed in special fields of observation; surely, that which we have entered is wide enough for all our industry, for all our devotion, for all our strength. We have outlived, if I may so speak, the disreputable era of our profession. We have seen it acknowledged as important; we have proudly beheld our own land leading all others in this department of the curative art.

It is for us to maintain the respectability and the position which have been so hardly earned, by sternly discountenancing empiricism, whatever may be its form, however dazzling may be its assumptions, or however brilliant its temptations.

RANDOM THOUGHTS.

BY GEO. WATT.

This paper is what its name imports. The thoughts here recorded are set down without any regard to order. Many of them were noted, in memorandum, on waste paper, by the wayside, or at public meetings when the proceedings proved uninteresting. Some were suggested by the casual remark of a professional brother, some by a glance at a sentence in an article which time did not permit us to read; and some were not suggested at all, but sprung into existence of their own accord. We write them down to be relieved of them, just as a young lady marries an importunate lover, "to get quit of him."

Professional Hobbies.—This term is generally used in an opprobrious sense—but why? Does the traveler treat with contempt, and speak disparagingly of the faithful courser that has carried him safely to the end of a successful journey? And, especially if he is traveling for a prize, and his steed has carried him far in advance of all competitors, is he not tender in his caresses, and faithful in his attentions to the noble animal? And if the prize can only be gained by making the journey, and the way is so long and so difficult that but few animals can endure the travel, would we not regard as an ungrateful wretch, the successful rider, should he malign or maltreat the faithful companion that carried him to the goal? And what if those who are distanced in the race disparage the qualities of his steed? Will he therefore discard him and go afoot, ride a donkey, or a spavined hack, or abandon the race entirely?

Well, to bring this thought home, the whole dental profession is, or should be on a journey. The way is long and difficult. It is rough, uneven, and steep. It leads from the depths of professional ignorance and degradation to the hights of professional knowledge and respect. A prize is held out to all who make the journey and reach the goal—a prize made up of a series of prizes—which consists of all those blessings and enjoyments which make the life of the true professional man desirable over that of the charlatan and the impostor.

In a race or a journey, those who ride usually advance faster than those who walk. And, if the pathway be unexplored, those in the rear are dependent on those in advance for a knowledge of the way, and for the information which is necessary to overcome its difficulties. So in our profession, those who ride are in the advance, and those who walk follow behind; while those who stand still, or sit idle, are left out of sight, and cease to be regarded as members of the *body professional.*

But what do those in advance ride on? On HOBBIES—*professional hobbies;* for there are no railroads to knowledge in the dental profession. And why not ride hobbies, and rejoice in the qualities and capacities of our steeds? What is a hobby? Compare Webster's 1st and 3d definitions: "A strong, active horse;"—"That which a person pursues with zeal or delight." No mere pony or donkey, but a good strong courser which we may ride with "delight."

A professional hobby rider, then, is one who selects some subject or professional principle as his favorite, examines it in all its bearings, pursues it in all its ramifications, and makes it, throughout, tributary to the wants of his profession. And his researches in this direction are a success, like that of the traveler who, pressing in one direction, surveys a route or explores a river, while he who tries to travel two ways at once, fails to make progress in any direction.

All professional advancement has been and is made by hobby riding; but many fail to ride to the best advantage. Some mount a hobby, but finding it difficult to ride, dismount, and take a fresh one. This is soon deserted, and another is taken up,—each one being left before it is broken into rank, and, of course, but little progress is made. Others, again, mount their favorites, with whip and spur, and ride them to death, without reaching their journey's end; and, being themselves too far exhausted to arrest a fresh steed, pine by the way, while others pass them, and reach the goal.

Our advice is to select some favorite subject, pursue it with zeal and push it with energy; but stop and rest before you are too much engrossed by it to think impartially on other subjects, and especially before the profession has become weary of hearing it. But don't cease to make progress. Lay hold of another, while this one rests, and follow it up with equal energy; and don't get discouraged if you are charged with riding hobbies.

PLATINUM.—We have no notion of writing a chemical dissertation on this "noble" metal. We only wish to retrieve its name from the gross profanations to which it is subject in our profession. A *noble* metal has the same right to its title that a *noble*-man has. A chubby little boy, as he trundles his hoop, may with propriety be called "Jim along Josey;" but, when he goes with "a satchel to school," he reports his name as James A. Joseph; and, in due time, may be entitled the "Hon. J. Along Joseph, Esq."

Well, this metal was at first called "platina," a diminutive of *plata*, silver. Being found in minute quantities, and having the color of silver, it was given a name which implied "little silver."

When it became better known, it was named in accordance with the approved system of nomenclature, and called

PLATINUM. Let us drop the nickname, adopt the true one, and write it platinum. But if we must retain the old orthography, let us not pronounce it pla-*teen*-a, but plat-i-na, accenting the first syllable.

This is a small matter; but the credit of the professian is somewhat at stake. At the late Convention almost every member who had occasion to speak of the metal, used the obsolete, barbarous pronunciation, giving to strangers the impression that we were lacking both in taste and science.

ULCERATION.—This term is very vaguely used by a majority of our profession. If alveolar abscess is referred to, it is often said that ulceration has taken place. In a large majority of the cases in which the term is used, *suppuration*, and not ulceration is meant. If we pervert the word thus we must needs coin a new one to express the true meaning of ulceration. Many cases reported in the journals as well as in verbal discussions, are unintelligible, on account of the vagueness with which this and similar words are used.

(TO BE CONTINUED.)

NATIONAL SOCIETY.

REPORT OF THE COMMITTEE ON CONSTITUTION.

Mr. Chairman and Gentlemen:—The committee appointed by this Convention to draft a Constitution, beg leave to report, that they have attended to the duty assigned them, and would respectfully offer the following plan of organization; trusting that its imperfections and shortcomings may be remedied by *your reflections* and the *judgment of those* who shall participate in the final adoption of *a constitution* for the proposed association. A due regard for our own reputation, as well as a just appreciation of the rights of others, make it obligatory, that we should state, and desire the same to be placed upon record, that the plan of organization we submit to you, is based upon a constitution that was framed by some of the brightest and best minds of our country. We refer to the American Medical Association.

PLAN OF ORGANIZATION.

SEC. I.—NAME.

This organization shall be known by the name, style, and title of the *American Dental Association.*

SEC. II.—OBJECTS.

The objects of this Association shall be, to cultivate the science and art of dentistry, and all its collateral branches, to elevate and sustain the professional character of dentists, to promote among them mutual improvement, social intercourse, and to collectively represent and have cognizance of the common interests of the dental profession in every part of the United States.

SEC. III.—MEMBERS.

The members of this Association shall be exclusively practitioners of dentistry, holding their appointment to membership, either as *delegates* from local institutions, as *members by invitation*, or as *permanent members.*

The delegates shall receive their appointment from permanently organized dental societies and dental colleges in the Union, each delegate holding his appointment for one year, and until another is appointed to succeed him.

Each local society shall be entitled to send to the Association one *delegate* for every *five* of its active members, and the faculty of each college to send one of its members as a representative.

The members by invitation shall be practitioners of *reputable standing*, from sections of the country not otherwise represented at the meeting. They shall receive their appointment by invitation of the meeting after an introduction from any of the members present.

The permanent members shall consist of all those who have served in the capacity of delegates, and of such other members as may receive their appointment by unanimous vote.

Each delegate, member by invitation, and permanent member, shall be entitled to debate, and vote on all questions agitated in the associations, and be eligible to any office in the gift of the Association.

To defray the expense of printing the *transactions*, and to meet other incidental expenses, the sum of dollars shall be assessed annually upon all the members present at meetings of the Association. The payment of this assessment shall be required of those in attendance previous to taking their seats, and participating in the business of the session.

No member who is not present at a meeting of the Association, shall be required to pay the annual assessment; but no such member shall be entitled to a copy of the printed *transactions*, unless he pay into the treasury a sum of not less than the amount paid by members in attendance.

Each member elect, prior to the permanent organization of the annual meeting, or before voting on any question after the meeting has been organized, must sign these regulations, inscribing his name in full, specifying in what capacity he attends, and if a delegate, the title of the institution from which he has received his appointment.

No one shall be permitted to address the Association before giving his name and residence, which shall be distinctly announced from the chair.

SEC. IV.—MEETINGS.

The regular meetings of the Association shall be held annually, and commence on the third Tuesday in July. The place of meeting shall never be the same for any two years in succession, and shall be determined each year by vote of the Association.

SEC. V.—OFFICERS.

The officers of the Association shall be a President, two Vice-Presidents, Corresponding Secretary, Recording Secretary, and a Treasurer. They shall be nominated by a special committee of one member from every State represented at the meeting, and shall be elected by vote on general ticket. Each officer shall hold his appointment for one year, and until another is elected to succeed him.

The President shall preside at the meetings, and perform all the duties that custom, or parliamentary usage may require.

The Vice-Presidents.—In the absence of the President, one of the Vice-Presidents shall assume all the duties of the office;

and, in the absence of these officers, a Chairman, *pro tem.* shall be appointed *viva voce.*

The Corresponding Secretary shall attend to the correspondence with the Association, and give due notice of the time and place of each annual meeting.

The Recording Secretary shall keep accurate minutes of the proceedings of the Association; preserve the archives and unpublished transactions, and attend to all other duties that appertain to the office.

The Treasurer shall have the immediate charge and management of the funds and property of the Association, and shall present a balanced account, duly authenticated, at every regular meeting, to the Committee of Publication.

SEC. VI.—STANDING COMMITTEES.

The following Standing Committees shall be organized at every annual meeting, to prepare, arrange, and expedite business for each ensuing year, and to carry into effect the orders of the Association not otherwise assigned, namely: a Committee of Arrangements, of Publication, on Prize Essays, on Scientific Investigation, on Dental Pathology and Surgery, on Mechanical Dentistry, and on Dental Education and Dental Literature.

The Committee of Arrangements shall be composed of five members, one of whom, if possible, shall reside in the place at which the Association is to hold its next ensuing annual meeting. They shall be required to procure suitable accommodations for the meeting: to verify and report upon the credentials of membership; to receive and announce all essays and memoirs voluntarily communicated, either by members of the Association, or by others through them; and to select and announce at the earliest period practicable after their appointment, subjects for discussion at the succeeding annual meeting.

The Committee of Publication, of which the Secretaries and Treasurer must constitute a part, shall be authorized to employ a competent reporter, to furnish an accurate report of the proceedings of each meeting. They shall superintend the publication and distribution of such portions of the Transactions as the Association may direct. The five members of this committee shall annul, accredit, and authenticate the accounts of the Treasurer, and present a statement of the same in the annual report of the committee; which report shall specify the character and cost of the publications of the Association during the year; the number of copies still at the disposal of the meeting, and the funds on hand for further operations. The committee shall be instructed to print at the beginning of each volume of the *Transactions*, the following disclaimer, viz.: *The American Dental Association*, although formally accepting and publishing the report of the various standing committees, and essays read before the Association, holds itself wholly irresponsible for the opinions, theories, or criticism therein contained, except when so decided by special resolution.

The Committee on Prize Essays shall consist of five members. Two prizes, of   dollars each, shall be awarded to the best two communications reported on favorably by the committee, and directed by the Association to be published.

The Committee on Scientific Investigation shall be composed of six members, to be divided into two sections; one on the Physiological and Microscopical anatomy of the teeth, and one on Chemistry in its relations to Dentistry. It shall be the duty of the different sections to institute, during the period of their appointment, a series of investigations and experiments in these departments, and present to the Association the result of their labors.

The Committee on Dental Pathology and Surgery, consisting of five members, shall have under consideration everything that appertains to the pathological conditions of the teeth and adjacent tissues, and the remedial agencies embraced under the head of operative dentistry. All improvements in the latter department shall be thoroughly tested, and reported on before the Association by this committee.

The Committee on Mechanical Dentistry shall consist of five members, who shall receive and take cognizance of plans, improvements, and specimens in this department, that may be presented by persons desiring to bring them before the Association. The committee shall be authorized to reject those that they may deem unworthy of presentation.

The Committee on Dental Education and Dental Literature, consisting of five members, shall make annual reports on these important subjects.

The selection of the chairmen and members of the different committees, shall be referred to a nominating committee.

AMENDMENTS.

These articles may be altered and amended with the consent of three-fourths of the members present, at the next subsequent annual meeting to that at which such amendment or alteration may have been proposed.

In acknowledgment of having adopted the foregoing propositions, and of our willingness to abide by them, and use our endeavors to carry into effect the objects of this Association, as above set forth, we have hereunto set our names.

NAMES OF MEMBERS.	RESIDENCE.	INSTITUTIONS REPRESENTED.

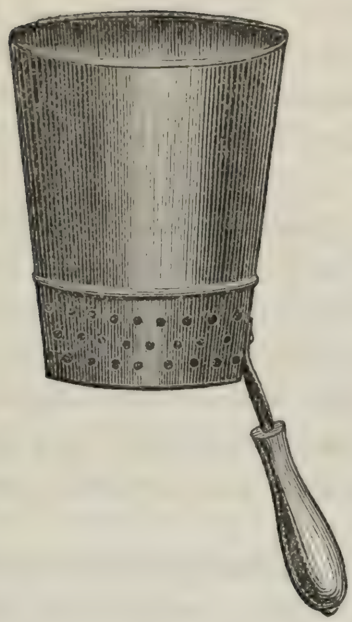
THE ORDER OF BUSINESS.

The order of business at the annual meetings of the American Dental Association shall at all times be subjected to the vote of three-fourths of all the members in attendance ; and, until permanently altered, except when for a time suspended, it shall be as follows :

1. The temporary organization of the meeting, preparatory to the election of officers.
2. The report of the committee of arrangements, on the credentials of members, after the latter have registered their names and addresses, and the titles of the institutions which they represent.
3. The calling of the roll.
4. The election of officers.
5. The reading of minutes.
6. The reception of members not present at the opening of the meeting, and the reading of notes from absentees.
7. The reception of members by invitation.
8. The reading and consideration of the stated annual reports from the standing committees.
9. The reading of essays.
10. The discussion of topics selected for the session.
11. The selection of the next place of annual meeting.
12. The new appointments to fill the standing committees.
13. Resolutions introducing new business, and instructions to the permanent committees.
14. Unfinished and miscellaneous business.
15. Adjournment.

Committee. { J. H. McQuillen,
W. M. Wright,
J. Richardson.

SOLDERING MADE EASY.



THE usual method of soldering artificial dentures, as every practitioner well knows, is attended with no little labor and inconvenience. In view of the imperative call for some better means, and in the hope of overcoming, or at least mitigating these difficulties, I was led to contrive, that which I shall here designate, a DENTAL HAND FURNACE.

Notwithstanding I constructed and used this furnace nearly five years ago in the city of Philadelphia, it appears to be very little if *at all* known to the profession. And as I am ever willing to contribute my *mite* to promote the useful, I take this opportunity of assuring my professional friends, that it wholly supplies the *desideratum.*

MATERIAL, FORM AND DIMENSIONS.—The body of this furnace is made of Russia iron, No. 26. In form it is conical—its perpendicular depth is five inches—its top or greater diameter, five and a half inches—its base four inches, with an *unperforated bottom.* The top is finished by a No. 10 wire passing around it. The body for two inches above the bottom, is closely perforated with holes $\frac{1}{8}$ inch in diameter; close to the top of these holes, there is a sunken bead, or O. G. swage, which supports the grate. This grate should be made of No. 18 or 20 iron, also well perforated with holes $\frac{1}{4}$ inch in diameter. Over the groove or seam, and at the *bottom* of the furnace there is riveted a small iron shank, such as may be seen attached to the ordinary coal shovel found in every house. This shank looks downwards and outwards at an angle of 45 degrees, upon which is fitted a nicely turned wooden handle.

The space between the bottom of the furnace and the grate, serves a double purpose, first affording a good draft causing the fire to burn briskly when once under way, and secondly, not permitting the handle at any time to become uncomfortably warm.

Directions for use.—Fill the furnace with charcoal, and kindle; or with live wood coals if you have them. Your *teeth* having been previously put up in sand and plaster, you now place them on the burning coals, piling fresh coal all around the outside of the teeth. Do not use the *bellows* at first, as this would fracture the teeth, but after they have been on a few minutes, you may do so not only with impunity, but with advantage.

The plate by this means will be *gradually* heated up, the opposite of which is doubtless one great cause of the *plate springing.* As soon as the plate reaches a dull red heat, grasp the handle, which will allow you to wield the whole mass with great ease, carry it to your spirit-lamp, and with a mouth blow-pipe such as I have described in a previous number of the *Dental Register,* direct a pointed flame, and you will be surprised at the facility and rapidity with which this contrivance enables you to solder. I have frequently soldered by its aid a full arch in from two to three minutes, and under very favorable circumstances in a *single minute.* When the soldering is completed, lift off the teeth, empty the furnace, take out the grate, and place the teeth on it. Then turn the furnace upside down over them. This allows them to cool very gradually and uniformly, which will effectually prevent them from cracking, as well as afford another means of preventing the springing of the plate.

Sept. 5th, 1859. Wm. W. MORGAN.

DENTAL FEES.

BY B. WOOD, M. D., DENTIST.

This subject has received a good share of attention from time to time in our Journals. It merits all it has received, and I think, admits of further discussion without exhaustion. I propose some remarks relating to it, although I do not feel capable of doing it justice, and have not the time to arrange what I have to say in the best order for *print.*

It is conceded by all that the remuneration for dental services should be such as to command the requisite ability, and to compensate for bestowing all the care, labor and expense demanded for the successful execution of whatever we undertake. Competent and reliable operators, one would suppose, ought surely to receive *as much* for their *time* and *labor* as those who are not at all, or but illy qualified to discharge the duties they assume. Nevertheless it may be safely said as a general thing, the latter class obtain a larger remuneration for the actual amount of time and material expended than the former. Their patients too, pay the tax with cheerfulness, or even gratitude, imperfect or worthless as are the operations, while they would loudly complain if required by the former to pay a like sum for a similar amount of time and labor spent in the bestowment of substantial services.

I speak now of services belonging exclusively to the province of the dentist, and not of those pertaining in common to him and the physician or surgeon, which it is to be remarked, thanks to the medical profession, the skillful operator generally obtains better pay for the time occupied, than his unskilful competitor. In such cases the patient sometimes estimates the "services" by the amount of labor, as in the case where the regular fee for extraction was thought extortionate because another had *pulled at* the same tooth ten times as long,—dragging him to whom it was *attached*, all about the room,—and only charged half as much!

If a proficient operator would consent to plug or insert teeth upon the model of quackery, he could make, at *quack prices*, more than he could in the faithful execution of his task at even the highest rates. This is known but too well by those disposed to yield to popular prejudice in opposition to the dictates of conscience, preferring to put off inferior work at a reduced price, than to encounter the imputation of "extortion." The outward pressure sometimes compels to the adoption of this course as the only alternative to secure business. There are many places where the customary rates (as established by empiricism,) are insufficient to enable the practitioner to *learn* to execute well. Custom is of course inexorable, and he must remain in *statu quo* or retrograde, most probably the latter.

We say, no doubt, truly, the masses do not appreciate the importance of good operations, nor the skill required in their execution. Yet how often is it that the latter class, sufficiently affluent and intelligent, who know well enough to choose the good and eschew the bad, when they see unmistakeably, a reliable dentist has devoted vastly more time and labor (to say nothing of skill,) in a given case than is customary with pretenders, nevertheless demur at any thing like corresponding remuneration. We are frequently consulted in cases of bad fillings which the patients, conscious of their worthlessness, wish replaced, where it would have been easy to "stuff" a dozen or more after the same style in the time required to do any one of them perfectly; but should a dentist in such case charge twelve times the cost of the original plug, what a commotion would it stir up! Indeed he is often expected to do the work at "about the same." I have been more astonished at the stupidity, or audacity evinced in such instances, than any thing else I know of. It is remarkable that almost universally there appears to be little value attached to the *time* of dentists compared with the ostensible amount, or *number* of operations.

The evil of such a state of things is apparent—a premium for empiricism and dishonesty—a barrier to progress in the path of excellence.

Quackery has doubtless had much to do in bringing it about. Quackery holds the preponderance in point of numbers; is busy, active, untiring; everywhere at the right time, efficiently at work. Quackery is eloquent, persuasive, cogent in argument, and withal exceedingly sympathizing and philanthropic.

While the qualified dentist, with a proper respect for his calling, remains at his office relying upon diligently acquired knowledge and skill, the quack sallies abroad, is sociable, ingratiates himself with the dear people; "he talks as though he understood the business;" he "reasons well;" he offers to operate for them "*so* cheap"—at "Northern prices," at "Eastern prices," at "European prices," as the case may be. He tells them the charges of reliable dentists are extravagant, exorbitant, really an outrage. He explains how little gold it takes to plug a tooth, or put in one, and reasons mathematically of profit and loss. He wouldn't interest himself if it were only the rich; but persons moderate in circumstances can't stand it; and the poor—Ah, the poor! The quack is the especial sympathizer and guardian of the poor. He will take their money for pretended services which he knows to be worthless, and only calculated to lull them into a false security, until their teeth are lost and require a new set at his hands—at "half price;" at the same time conjuring up to their imaginations such spectres in regard to "extortionate charges" as effectually deter from seeking the counsel of those who are competent to benefit.

Nor is this confined altogether to quacks and pretenders. Educated but inexperienced dentists, and practitioners of fair reputation, but who have not attained the highest excellence, often join a like outcry against operators of deservedly higher eminence, which they will be sure to regret should they ever come to merit a like eminence; for they will find that it is only to be won and maintained at an expenditure of skill and labor which they have not as yet learned to bestow. To this may be added the culpable and mischievous propensity to disparage each other, incited by egotism, selfish ambition, cupidity or envy.

Beyond doubt, quackery, backed by such respectable aid, has exerted a wide-spread influence. But apart from this, there are other things which have perhaps equally contributed to the popular misconception and prejudice referred to, and prominent among these I am disposed to reckon the custom of charging by specific operations, rather than according to time occupied; thereby leading to misconception as to the basis of valuation. Thus in the operation of plugging teeth, the public have been led to affix a definite value to a plug, variable 'tis true, according to material used and according to size. But with them, in any given case, a plug is a plug, and they can't or won't comprehend why they should pay one operator more for the *same thing* than another. They acknowledge, 'tis true, a difference in the execution, and they learn that whereas the fillings of some stand and save the teeth, those of others do not. But they can't understand why it should *cost* much more for the former than for the latter; nay, why, as being less liable to need repair, they might not be afforded for less; conceiving at all events that the increase of business, sure to result from superior success, ought to be an ample reward.

That they should not be able to discriminate as to good and bad, even had they a fair inspection, is not strange, seeing that it takes a practical dentist to know a good plug from an indifferent one:—certain it is, some practitioners imagine their own to be very good, until time proves the contrary. It is folly to hope the masses will ever be competent to judge of the comparative excellence of our operations, although they can be taught to form some estimate as to the care and time bestowed upon them.

The number of plugs is no criterion of the extent or value of our services to a patient, since one series of operations may require thrice the time and material of another, the number of plugs being the same. Or in the same mouth the number of plugs may admit of multiplication or diminution. Thus in the crown of a molar, dotted with two or more decayed spots, all connected by seams or veins, one operator, influenced by low rates, might choose to introduce two, four, or more fillings, while another would feel it necessary to bring the whole into one, at an increased tax in time and material.

Similar references might be made to other operations; also to the putting up of artificial teeth. In the latter we all know how much labor can be saved, and yet the patient scarcely perceive the difference, although a faithful attention to all the details, which consume so large a proportion of time, makes a vast difference as to the perfection of the whole,—in harmonizing with the expression, in comfort and in general utility.

It will be seen upon how false a principle our customary estimate of fees is predicated, how it is calculated to mislead the public, what advantage it affords to empiricism and dishonesty, and how it serves to retard the march of excellence.

Another thing contributing to the popular prejudice with reference to remunerative fees, is the disreputable practice of *underbidding*. If a "job" is so greedily sought after that honorable men will stoop so low after it, the inference is fair that it must be a source of large emolument, and the lowest price thus bid will be set down as nearest its true value. I hope this sin is not common with recognized dentists. An honest shoemaker will scorn to underbid his neighbor, and his is a much more honorable calling than that whose regular members should be noted for such poor resorts. Difference in fees may and always will exist, but that is no extenuation for underworking one's own regular rates in order to get a "job" from a professional brother.

Allied to the foregoing is variableness in prices, according to customers—the "take what you can get" system. Now, as no one is expected to do work for less than he can afford, whatever he charges above his lower rates, provided the service or workmanship be the same, is regarded so much above par—in brief, a *shave.* But dealing with dentists every body negociates for the "best," and thinks he gets it; so that this deduction is sure to follow. Indeed, such a course usually marks out the *pretender* in the full sense of the word, whose lowest charges are generally all his "best" operations are worth. Nevertheless those unable to discriminate are thus misled to the general prejudice.

Another practice similar in its results, although in itself commendable if prompted by right motives, is that of dispensing services *in part* gratuitously: — services wholly gratuitous come so clearly under the head of benevolence that they need not give rise to misinterpretation. Other things the same, men are most liberal in that which costs little. A series of operations which would be speedily run over by the empiric at a trifling expense, would prove, in the hands of an honest and efficient dentist, a tedious and expensive task, and probably to the neglect of other business. It is therefore, hardly presumable that he should be over solicitous to do gratuitous work. When dentists not remarkable for benevolence in other things, are seen eager to undertake cases for the indigent or penurious at their own terms, it affords a fair presumption that it is attended with no sacrifice, and if the work is not slighted, which the plea of benevolence would seem to forbid, it seems to depreciate dental services in the same way as the instances above noticed: or if any thing is conceded on the score of generosity, it still argues such excessive rates in ordinary cases as shall compensate for the deficiency in these.

Those who have once received benefits in this way ever after expect the same, no matter how their circumstances may have improved. You charged me only so much before, is the standing appeal—(the bestowment of an *extra* fee in consideration of a former gratuity is unheard of). So also their acquaintances come with the like expectation. Howbeit they are willing the dentist should get what he can "out of the rich" whom they appear ready enough to turn over to him as legitimate subjects for *plunder*, provided only he will be "reasonable" with themselves. The liberal minded on the contrary cannot see the justice of imposing an extra tax upon them for the benefit of others without so much as receiving credit for it. The effect upon the whole is prejudicial, resulting in general evil which probably far overshadows the good accomplished by partial gratuities.

No one would discourage acts of true generosity, but they should be clearly such, and bestowed with discrimination, especially where called for as a matter of ornament rather than utility. Many can afford artificial teeth when they can be got under price, who would feel too poor to spend half as much to preserve their natural teeth, though perhaps of infinitely more importance.

Having thus indicated some of the sources of popular prejudice and misconception in regard to dental fees, the corrections will readily suggest themselves:—a more correct standard of estimate for services, regulated by the time required for their efficient performance; greater uniformity of rates among the profession, and more scrupulous adherence to them by individual dentists.

NASHVILLE, Sept. 7th, 1859.

N. B.—SLAYTON.

MESSRS. EDITORS:—I believe it is very generally known that I am opposed to patenting any thing that has for its object the alleviation of human suffering, even were the inventor entitled by law, to a patent—thinking as I do, that the unscrupulous as well as the ignorant operator, takes thereby an advantage not consistent with the true dignity of a professional gentleman—much more am I opposed to the dabbling experimenter who fancies that he has discovered a great desideratum, and straightway makes an application for, and receives a patent for that which is perhaps of no practical utility, or of only limited application, and probably before used and thereby dedicated to the public long before the so claimed *inventor* had taken his bandanna from his pocket and wiped the dust off from his *specs* to *see into it.*

It is true that I can not prevent members of the profession from procuring patents, nor do I desire to do so, if they have a *valid* claim, however much I may be opposed to the policy. But I will not "stand at ease" when I know of the law being invoked to throw a halo of glory around a worthless or invalid process, as laid down on the usual *sheep skin* issued from the Patent Office, and granted by parties who know just about as much of the subject matter of it as does a bell-wether the price of putty—no, no, if we must have patents, let there be practical utility, novelty, and all the requirements of the law, and then will I hold my peace—and for this I am denounced as crazy.

> "That he is mad, 'tis true: 'tis true, 'tis pity;
> And pity 'tis, 'tis true; a foolish figure;
> But farewell it, for I will use no art.
> Mad let us grant him then."

Slayton's patent having been granted August 7th, 1859, let us quote the specification.

"The nature of my invention relates 1st the securing of art teeth upon plates of gold and silver *by means of an amalgam* of gold and silver, or both, combined with mercury. 2d. Forming by means of said amalgam an outer flange or rim which may constitute a step in which the base of the teeth may rest."

"The operation of securing teeth upon plates of gold or silver by means of my invention, may be described as follows:—

"The plate will be struck and fitted to the mouth, the articulation secured and the teeth ground to fit in the ordinary manner—the teeth will then be fitted to their places upon the plate, the outside of the teeth and plate will then be inserted in a preparation of asbestos and plaster of Paris *or other suitable preparation* for properly securing the teeth in their places. *The plate upon the back of the teeth* will then be well cleaned in order to remove all foreign substances, and a brass or silver wire brush, first dipped in a solution of nitrate of mercury and then in pure mercury will be passed over the plate at the points where the amalgam is desired to adhere until those points are perfectly silvered over. Gold or silver or both combined, properly prepared by precipitation or other mode with mercury, and well tritarated will be placed in a buckskin or other suitable sack and then in a vice, and all the mercury possible pressed out in that manner—the amalgam is then again triturated, and with proper instruments packed around the backs of the teeth, imbedding the hooked rod or wire and perfectly filling the interstices between the teeth, and forming the back as shown in fig. 2, the finish is made complete as no allowance is necessary for shrinkage. The inside or back of the teeth are now invested with the preparation before described, in such a manner as to cover all the amalgam—the said preparation will then be removed with a suitable sharp instrument from the outer edge of the plate, and such portion of the teeth as are to be covered by the flange or rim—the outer edge of the plate will then be treated in the manner above described, and the rim formed of the amalgam precisely similar to the backing upon the inside of the teeth as above set forth. The finish now being complete the outside of the plate and the rim formed as aforesaid will be again invested in the said preparation of asbestos and plaster of Paris, so as to completely cover all the amalgam, two slight perforations being made at either end of the row of teeth to permit the escape of the mercury; the whole will then be placed in an oven or other suitable vessel for the purpose, and subjected to a heat of at least seven hundred degrees, and kept there from two to four hours or until the mercury is entirely driven off! *the amalgam will then have adhered to the plate in such manner as to form par* *of the same, and the teeth will be secured in the most perfect manner*, should greater strength be required (after this most perfect manner? W. M. H.) after the heating process, the amalgam may be washed with a solution of borax, and gold or silver solder applied; the whole will then be subjected to a heat sufficient to melt the solder which will flow freely through the cells vacated by the mercury, *thereby* forming a perfect union of the plate and amalgam (still amalgam after the evaporation of the mercury? W. M. H.) in one solid mass of metal." (Now, reader, look at the claims 1st and 2d, and tell me what unites the teeth to the plate, the amalgam or the solder?) Wonderful claimant, astute commissioner!

The above is a correct copy of Slayton's process from the Patent Office, and as Slayton with impudence almost unparalleled, in the Sept. number of the "Register" stated that in "no important point" did I describe his work, I will here transcribe a portion of my publication in the July number of the same.

I say,—" The process is simply this:—Having struck up your plates, ground, arranged and articulated your teeth in the usual way, flatten and bend the pins and invest the outside of the teeth and plate in a mixture of plaster and sand or asbestos, to retain them in their position; then prepare your amalgam of gold or silver (as the case may be) with mercury, either filings or precipitates may be used) triturate well, and press out as dry as you can with heavy pliers the free mercury—then with a blunt instrument pack the amalgam over the teeth down to the plate, to the fullness desired, filling every crevice under the teeth, &c.; then invest the inside of the plate (over the amalgam) with plaster and sand or asbestos, and cut from the outside whatever is necessary to expose the surface to be occupied by the rim; pack on the amalgam as before, and cover with plaster and sand, then cut two holes, one at each extremity of the jaw through the investient down to the amalgam, to allow the mercury to escape; then place in an oven of a stove or in any position where a heat of from 680 to 700 deg. can be applied for four or five hours, or sufficient time to evaporate all the mercury. After the mercury is all evaporated renew the investient, and if additional strength is required, cover the surface with a solution of borax, and flow solder over it, so that it will pass through the pores or cells down to the plate; then burnish and polish."

Now, dear reader, again, what do you think of the veracity of a man who can sit down and pen such an article after what I have put before you? He certainly did not expect to get a patent, or was ignorant that a copy of it could be had after it was issued. His offer of instruction, you see, was superfluous, for I had already given a clearer description than the patent specification. The merits of the patent I do not consider worthy of comment, as I said before, the only application of utility that can be made is the building up of a masticating surface, where the teeth are so short that strength enough can not be obtained in the mineral tooth, and then the work is backed and soldered in the usual way, the bearing or grinding surface being supplied with metal. Such work I have done years ago (and will do again when the case demands it) and it *entirely invalidates the patent.* Without the solder the work is not one of practical utility, as evidenced by my breaking Slayton's show jobs (which were not soldered) simply with my thumb and fingers—and this is the work that was to be palmed off upon the profession for a "*reasonable sum for an office right,*" if they wished the *improvement!!!* Agents were getting ready to make their "tarnal fortin" by peddling the "wonder," and one hailing from Cincinnati had gone so far as to give up his business for the venture, notwithstanding what Slayton says. I feel half sorry that I prevented his following the vocation, for I think him much more eminently qualified for that business or the engineering of a steed horse than the practice of dentistry.

On the gutta percha question I have a few words to say. I consider it a *necessary* about the laboratory to restore the integrity of temporary cases, and is much better than the almost black article which I used before Slayton succeeded in giving it a color somewhat resembling the gums, which I now use in preference. I gave him a certificate that I believed it a good thing, *or at all events was going to try it*—and if he used it other than as above, I am very sorry that I should have been a party to the swindle.

That I claimed other than as above stated for my use of gutta percha, I give the "lie direct," and that it may be known how to make the article, it is simply necessary to knead the gutta percha made plastic in hot water, with zinc white, until it will take a red color with ordinary polishing rouge.

I confess to the profession and to Slayton that I have advertised him more than he deserves, but having "put my foot in it," I have been compelled to proceed, hoping that circumstances may not compel me soon again to resort to the mode of warfare practised by the Yahoo.

CINCINNATI, AUG. 14, 1859.

This is to certify that about four years ago Wm. M. Hunter made for me a set of artificial teeth with metallic masticating surfaces on gold plate, which has been worn with satisfaction to the present time. (Signed) JACOB GRAFF.

The end was accomplished by the use of amalgam, the mercury being driven off by heat and the pores filled with solder, which work I manipulated in Dr. Hunter's Laboratory.
JOS. DOUGHTY.

I examined the above at the time of making, and have likewise frequently used amalgam in the process of mounting teeth on platina plate for continuous gum work, in Dr. Hunter's Laboratory. GEO. W. KENDALL.

The above is only published for the purpose of preventing imposition upon the profession, not that it is very wonderful, although good. W. M. HUNTER.

"REMARKS OF PROF. McQUILLEN ON NITRIC ACID TREATMENT OF EXPOSED PULPS."

BY J. T.

IN the September number of the *Cosmos*, we are somewhat sharply taken to account, because of the remarks we made in the August number of the "Register," upon the treatment of recently exposed pulps, by nitric acid. The *Cosmos* "feels impelled to protest emphatically against this kind of treatment." Well, the editor can *protest* as often as he chooses, but it is presumable that those who have tested and found this treatment successful, will continue to use it notwithstanding the protests. That the " vast majority of thorough operators in every part of the Union, had years ago abandoned as impracticable the effort to preserve the vitality of exposed pulps," is wholly new to us, and it is so new that we have not brought ourselves to the belief of it yet. It is true that the principal part of the profession in a few localities (one or two) have for the most part abandoned the treatment of exposed pulps with a view to their preservation. With them the simple exposure of a pulp is a loud call for its destruction. We have not so learned, from *precept* or *experience.* We have been treating exposed pulps, with a view to their preservation, by various methods for the last eighteen years, and the success has been such as to warrant a continuation. We did not abandon it because in some cases the desired end was not accomplished, but we endeavored to discriminate more closely, and treat more carefully.

The preservation of the vitality of the pulps of teeth is a desirable object, and one that should be sought even though an exposure of the pulp has been effected.

In the remarks we made upon the treatment of exposed pulps with nitric acid, we aimed simply to state a few plain, simple facts, in regard to the matter, and did not imagine that the statement could be made a matter of controversy. We stated the kind of treatment we employed in a specific class of cases, the method of accomplishing the work and the results.

Now, in regard to any of these, we have not much changed our opinion, we still continue this treatment, notwithstanding the castigation, and obtain results with which all concerned are well pleased. It is true that we have not employed this treatment a great while, but others in whom we have confidence, have been employing it for a number of years, and with very great success, and we have been led to experiment, and the results have been just as we stated. Within the last six months we have treated some twenty favorable cases, and all resulting well thus far; they are cases, the most of which we have seen since the operation, and any one of them giving trouble would be reported at once, for such cases were selected as we could control and such as would be reported.

There were several cases that we accounted unfavorable at the time of the operation, one-half or two-thirds of these were failures, but some of these are doing well as yet: They were unfavorable, either from a bad constitution, or some ill predisposition, long exposure, and irritation or inflammation of the pulp. Now if we have been employing this treatment, and we have these results, as we hope we are yet of sound mind sufficiently to determine, what will the "Cosmos" do about it?

Now we do object to having our head cut clean off at one swipe. We regret exceedingly that we are so far behind the times, as not to know that the "vast majority of thorough operators throughout the Union have abandoned as impracticable, &c." We always knew we were very ignorant, but then to have it told right out in the "Cosmos," knocked us all into a cocked-hat.

Well! we will never try to know any thing again! if we should somebody will know it before us, and more of it too.

What fools we have been these many years, blundering along, treating exposed pulps, when every body else had found it impracticable, and had abandoned it! We really begin to be afraid to do anything, lest the *vast* majority has found it impracticable, and abandoned it.

If it would not be impertinent, we would suggest that every part of the Union is not in Philadelphia.

The broom-corn straw is a good idea; we are thankful for it, and give due credit.

We shall report in future on the success of the nitric acid treatment,—and we shall endeavor to report correctly—notwithstanding the "*vast majority.*"

Editorial.

THE COLD WELDING QUESTION.

At the New York meeting of the American Dental Convention, three years ago, the welding properties of gold were referred to, when some member suggested that there were but *two* welding metals, and that these were iron and platinum. We then remarked that this assumption was incorrect; for gold was pre-eminently the welding metal, as every worker in *pure* gold well knew. We had reference to the practice of gold beaters uniting fragments of leaves by pressure with a smooth-edged instrument. Prof. Austen remarked, (though in the report the statement is credited to Prof. Buckingham,) that if it were true that pressure would weld gold in a cold state, it was a new fact in chemistry. Prof. Buckingham, then, and afterward in the News Letter, maintained that the union of gold by pressure was not welding, but rather a species of riveting, as when two sheets of metal were laid together, and a punch was driven through both, at various points, they would adhere together. And, indeed, this theory leads to the inquiry as to the existence of welding properties in any metal. In uniting two pieces of hot iron, the particles of one may be driven into the pores of the other, and retained there by riveting.

Another theory was, that, as gold could only be thus united when freshly annealed, the union would not be permanent, but that the particles, losing their adhesiveness would separate. This was maintained, earnestly, by Mr. James Leslie, at a meeting of the Mississippi Valley Association. In advancing his theory he gave many interesting facts; and, finally, annealed three leaves of No. 6 foil, and united them by the pressure of his finger, suggesting, however, that they would, on exposure, lose their adhesiveness, and separate. We purchased these leaves, and exposed them "to all weathers," for ten months; and, throughout, they remained inseparable. Notwithstanding it contradicted his theory, no one was better pleased with the result than Mr. L.

Long before this, Dr. A. M. Leslie had maintained that gold foil was as adhesive as crystal gold; and we suppose, to this day, finds no good reason for a change of opinion.

But we set out to notice the progress of opinion, on this subject, in a few short years. All in the profession are now familiar with this property of gold; and it is almost, if not quite, unanimously regarded as *welding.* Prof. B., we believe, has dropped his rivet theory, and Prof. A. no longer regards it as a *new fact in chemistry,* but speaks of it in his late article on gold, as a well known and well established principle. Mr. L. is not concerned about the separation of welded gold, even though it be true that exposure interfers with, or destroys its adhesive properties; especially, when he remembers that though a reduction of temperature destroys the welding properties of iron, it does not separate two pieces already welded.

This subject affords us satisfactory evidence of the progressiveness of our profession; and the extensive use of adhesive foil, as recommended by Prof. Arthur, shows that practice keeps pace with theory.

W.

SUPERIOR STONE.

Dr. Robbins, of Meadville, Pa., at the late meeting of the Convention, presented us a specimen of polishing stone, obtained by him in the Lake Superior regions, which we find, in many respects, far better than the famous Arkansas stone. It puts a very fine finish on gold, and does not clog in the least with the metal. It is reduced to the desired shape much more readily than the Arkansas stone, and shows less brittleness when reduced to a thin edge. Altogether, we like it extremely, and hope it will be kept for sale at all the dental depots.

Dr. R. has our hearty thanks for the favor. W.

A QUESTION—PROTRUSION.

Why is it that gold fillings especially on the approximal portions of the front teeth, after they have been worn a few years, in many cases protrude from the cavity, while the filling is perfect and solid in the cavity? What should be done in such a case?

Q.

A solution of the above query is found most probably in the fact of the wearing away of the dentine and enamel that forms the border of the cavity.

The filling in such a case should be dressed down smooth with the present border of the cavity and finished as usual. There is no danger of displacing such plugs by dressing. T.

OHIO COLLEGE OF DENTAL SURGERY.

A preliminary course of lectures and demonstrations will commence in this institution on the 18th of October next. There will be one or two lectures each day, and three or four clinics each week from that till the first Monday of Movember, when the regular course will commence.

Much addition is being made to the several departments, especially the mechanical.

The laboratory is receiving a new supply of fixtures. Instruction will be given in all kinds and styles of mechanical work—all at least that have any intrinsic value. The Faculty are desirous that the students all be in attendance by the 18th of October, so far as possible, for it is the intention to begin in earnest, and work so throughout the session. T.

CRYSTAL GOLD.

A few years ago much was written and said upon the Crystal Gold subject. There was much discussion upon the point of its efficiency and durability. Considerable said for it, and much more against it ; this was probably a natural result, for taking the mass of operations, the failures were far more numerous than the successes. This might with truth be said of some other things than crystal gold. In a matter of this kind, the failures do not prove the unfitness or inefficiency of the material in question. But the success does prove both its fitness and efficiency. Five hundred men may try to make a gimlet of steel, and fail, and come to the sage conclusion that gimlets can't be made of steel, while one man who understands the matter, makes a perfect gimlet in a few minutes, and is able to demonstrate that good gimlets can be made of nothing else than steel.

We design to make a simple statement in regard to crystal gold fillings, and we do so because the statement has been so frequently and unhesitatingly made, that crystal gold fillings will become disintegrated, and fail to accomplish the object for which they were made.

This day, Sept. 12, Mrs. H. called to have her teeth examined. Two years and five months previous to this time, I filled seventeen cavities with crystal gold; eight of these fillings were in the anterior teeth, and these extensively decayed; to-day, these seventeen fillings are in as perfect condition as when made; there is no disintegration, the plugs are just as solid as when they were put in, they retain their finish perfectly, and not one of the teeth is in the slightest degree discolored. There has been no sensitiveness of the dentine since they were filled, though there was considerable previous, and at the time of filling.

In this case, the structure of the teeth was of an imperfect character, soft and decaying rapidly.

We speak of this case, because it was such an unfavorable one in the outstart, and the success is so signal. We might refer to hundreds of other cases, equally as successful, both our own operations and those of others. The finest fillings we have ever seen were made of crystal gold. We do not wish to revive the crystal gold controversy, but we do intend from time to time to speak of the success with, and efficiency of this much abused article; for we do believe as firmly as ever that perfectly crystalized gold, well manipulated, makes more perfect fillings than gold in any other form.

T.

A NEW WORK.

We have just received from the establishment of Rickey, Mallory & Co., a copy of Tome's Dental Surgery. We have not had time to examine it carefully, but from the character of the author and the hasty glance we have been able to take of a few pages, we hesitate not to pronounce it a good work, and one much needed by the profession, and especially by the students of the profession. As a text-book to the dental student, it will certainly be very valuable, and no student should be without it. It seems well written, and will certainly find a place in the library of every dentist.

After a careful perusal, we shall have more to say about it.

T.

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Original Essays and Communications.

"WHEN, AND UNDER WHAT CIRCUMSTANCES SHOULD TEETH BE EXTRACTED, TO SECURE A CORRECT DEVELOPMENT OF THE PERMANENT TEETH?"

(A paper read at the American Dental Convention, at Niagara Falls.)

BY JAMES TAYLOR, M. D., D. D. S.

Mr. President: From the manner in which this question is presented, one or two special thoughts are suggested which, although not in direct answer to the subject under discussion, yet, as they may give a profitable turn to the manner in which this question may be considered, I will dwell upon them for a moment.

The first thought is this: Can we by the removal of the deciduous organs (for these are the ones almost necessarily implied as to be removed), in any way affect the development of the permanent organs?

Is there not a law of the economy which removes the one and develops the other, which presides over all that change which is carried on during this interesting and important period of dentition?

The natural and uninterrupted operations of the economy should be sufficient, and generally are, to effect all the changes which take place in the system; yet there are cases where, from disease and other causes, the natural function is disturbed. Still the question comes up, will the removal of a deciduous tooth, at any period, affect the development of the tooth of replacement? Can the presence of the former by pressure or other means, prevent the full development of the latter? We know that the organs engaged in the assimilation and production of the one, are independent of those employed for the destruction of the other. True, the idea has been entertained, and perhaps very justly, that the development of the one was necessary to the removal of the other—that, without the pressure thus induced, absorption of the fang would not take place, or, at least, that the growth of the one was necessary to carry forward the absorbing, or destroying body prepared by an all-wise Providence for the destruction of the roots of the other.

Do we ever find the twenty teeth of replacement malformed or diminished in size, by the long retention of the deciduous teeth?

One of our most celebrated dentists, on the examination of the mouth of a young lady of 17 or 18, which presented an upper cuspid not yet shed, and no appearance of the permanent organ, was asked if he would remove the temporary. His answer was, not now; but at fifteen he would have done so. The idea was that the permanent organ had acquired a position somewhere in the maxillary arch, which it would now hardly leave. Whereas, if the way had been made clear at fifteen, it might have come in place.

The question might be asked still with propriety, was not that hidden cuspid fully developed? We believe that such have been found usually fully developed.

The malformed organs which are often found in the teeth of replacement, are not usually supposed to be thus affected by their confined condition when in a formative state. We have seen the development of the dens sapientiæ defective apparently for want of room, and have often recommended the removal of a defective molar, hoping thereby to secure a more perfectly developed and enlarged organ, to take the place of the one lost.

Observation appears to confirm this sufficiently, yet the evidence is hardly of a demonstrable kind; for we can not tell what the organ might have been, if left alone to work its more slow eruption. We are not satisfied that the inference to be drawn from such cases, even if true, would fairly apply to the organs of replacement; for they involve a more complex development and eruption.

Another thought is suggested to my mind, and deserves a passing consideration. The deciduous organs become involved in disease, and will this disease prevent the development of the organs of replacement? We do not deny that alveolar abscess, at the apex of the root or roots of the deciduous teeth, may so involve the surrounding parts in the disease as to destroy the sac in which the permanent germ is placed, and even the germ itself; yet this does not often occur, and perhaps partly because the crown of the replacing tooth is most usually developed before this takes place, and hence we so often see, shortly after the formation of an abscess, and the removal of the tooth which caused it, a new and beautiful tooth take its place. Not as often do we find the enamel of the new tooth eroded or injured as we would suppose. The earlier in life these abscesses occur, the more apt they are to injuriously affect the permanent organ; because the deposition of enamel and the formation of dentine have not been perfected in the new organ.

But one other thought in this connection, and the most important one, is this: To what extent can disease, local or constitutional, affect the development of the dental organs?

The earliest authors, reasoning from analogy, very justly infer that general constitutional disease must impair the integrity of the teeth; and hence, to the present time, there is a kind of vague idea that organs, so intimately connected with the general organism, must suffer with it, whenever involved in general disease. Even the mother's health is supposed to exert an influence on the teeth of her child.

All the researches made in physiology point to the fact, that perfect development can only take place in perfect health; yet to what extent the size and form of any organ may be affected, is a matter of much doubt and speculation. With regard to the dental organs, we believe that the general supposition is, that the effect is more constitutional than physical. Are we, however, sure that osseous development, which marks the peculiar physical characteristics of the different races of mankind, may not be more or less dependent on the kind of nutrition supplied? Can climate and locality alone be the cause of all the varied physical characteristics presented to our view?

There are marked hereditary tendencies, we admit. This is often seen in the form of the maxillary arches, and often presents one of the greatest obstacles to the treatment of irregularity of the teeth. Can we expect, by change of diet, and proper treatment of irregularity, in a few generations, to overcome this hereditary tendency? Will like produce its like, according to the laws of germinal force; or can that germinal force which, for instance, gives a protruding chin, be so changed, by diet and art, that, in a few generations, it will be overcome?

Can the profession give instances where the parents' teeth have been hereditarily crowded and thrown out of position, and where this has been remedied by art, and the like tendency in the children's teeth does not exist? If this tendency appears to be overcome, can it be attributed to the want of the like heteditary tendency in one of the parents?

In all animated nature, there appears to be a germinal power (if we may so call it), a power which sets in motion the springs of life, and which controls, to a certain extent, the future of that life. Still we see in the vegetable kingdom, and, we believe, in the animal also, wonderous changes, wrought by the nutritive supplies, and the trimming and pruning sometimes given.

It is known that the basis of all bone is phosphate of lime, and that certain articles of diet afford a far richer supply of these elements than others. Much attention, of late, has been given by the medical profession to phosphate preparations, for the cure of that great scourge of our race, consumption. Why, let me ask, not go back to the earliest generations of life, and say to the mother, The perfect development of your child, and that stamina which must sustain it through life, begin with you; and then, to the child, Your vigor of constitution, your manly form, and even the perfection of those ornaments of the mouth, which aid you in your intercourse with the world, and which commence that function of digestion on which all the assimilative powers of your system depend, now depend on your mode of living?

We fear that, as a nation, we soon shall have the very unenviable reputation of being *toothless.* We are certainly the most indiscriminate *feeders* in the world. An all-wise Providence has given us a land "flowing with milk and honey," and indeed almost every other good thing. Are we, with all our boasted intelligence, using these mercies for the great advance of human life? As a profession, we are, perhaps, doing more than is done in any other nation to meet, artistically and surgically, the wants created by dental disease. Would it not be well, as far as possible, to arrest the disease itself?

We may take a stunted, feeble-looking shrub, and, by transferring it to good soil and proper culture, develop, as it were, a new life, so that its after growth shall forever hide its feeble beginning. Are these vegetable creatures around us of more value than the dear ones entrusted to our charge?

The law which governs the development of the dental organs appears to be different from that which governs true osseous structure; and it is certainly, to a certain extent, independent of it. We are not certain but crowded dentures are the result more of imperfect osseous, than defective dental development. The alveolar processes, which are not dental in their structure, often appear to want the full development necessary to meet the demands of the dental system.

We but seldom find a crowded denture where the maxillary arches are full formed. The teeth are moulded for large jaws; but the laws of health, which govern the development of the general frame, have been so long violated and neglected, that the frame is necessarily too small. The teeth are very properly considered the most unerring evidences by which to distinguish the inherent constitutional tendency of the system. In their physical characteristics they change but little, by change of diet, location, etc; while the general physical traits may almost lose their original impress.

There can be no doubt that the constitution of the teeth is more or less affected by the kind of nutrition supplied during their formative state. We are not sure but the refinements of civilization, while pampering to the taste and eye of our race, have not stripped our food of the very element we most need.

The aborigines of our land, and even the hardy pioneers of our own race, possessed, as a general rule, larger frames and more enduring constitutions than we do. That their dental organs were better, and particularly the former, there can be no doubt. We are not speaking of what they are now; for they have changed, and their alveolar arches will now fail to present such specimens of teeth as are generally found in the sepulchres of their dead.

In all the bounties thrown around us for our support, certain elements exist in proportions about such as are demanded for the elaboration and reparation of our system. All our aliment is supposed to contain one of three important principles necessary to animal life.

These are the calorifacient, or heat sustaining principle, which is found in most vegetable matter and in sugar; the nutrient principle, which is abundantly found in animal food

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particularly the lean thereof, in milk, eggs, potatoes, wheat, rye, etc ; the inorganic element, from which are derived those earthy constituents which build up the frame-work of the system (and hence good bone and teeth), which are to be found most abundant in eggs, milk, animal food, and particularly in wheat, rye, oats, potatoes, etc. Bread is said to be the " staff of life." Let us see how much of the *real* staff is taken from the wheat, before we *now* get our *bread.*

Prof. Johnson, in his analysis, gives us the following:

In 1,000 lbs. of whole grain, there were, muscle material	156	lbs.
Of the fat principle	25	"
Of the inorganic elements, for bone, etc	170	"
1,000 lbs. fine flour contained, muscle material,	130	lbs.
Fat principle	20	"
Bone material	60	"
1,000 lbs. of bran contained, muscle material, none.		
Fat principle	60	lbs.
Bone material	700	"

What is the inference here ? It is that the refinements of civilization have so refined, at least this one article of our food, that it is hardly fit for the elaboration of bone material, or for our dental organs. We have taken from the wheat more than three-fourths of those elements needed in this operation. We take our corn, rye, and many other articles of our food, and the same thing is done, to a considerable extent. The Scotch, who generally present us with good specimens of teeth, do not thus serve their oat meal, which makes, to some extent, a national article of food.

But this subject, however interesting and instructive, would lead me from the question proposed for consideration. I have incidentally alluded to it, because it appears to lie at the foundation of perfect dental development.

I presume, Mr. President, the aim of the question before us is " when, and under what circumstances should teeth be extracted, to secure a regular and symmetrical denture ;" or, if you please, to prevent irregularity. This would appear to be the natural question, in connection with the second subject presented in the programme.

Delabarre considers the eruption of the teeth as a natural partrurient effort, and maintains that, as such, it should be left as much to the natural efforts of the economy as possible. I believe that parents, and often dentists, inflict more injury than benefit, by untimely interference. That there are numerous cases, however, which require aid at our hands can not be doubted; and there is no subject in the whole range of dental practice more difficult to definitely define than this. There is scarcely a case which can be presented, which may not be so affected by circumstances, that the usual practice should be varied.

The irregular manner in which the temporary teeth are shed and the permanent erupted, gives continued cause for change in practice; yet there are certain rules that, perhaps, should never be departed from.

Let us look at the conditions of the deciduous and permanent organs just before the loss of the one, and the eruption of the other commences. Their relative position at this time is of vast importance in the proper study of this subject.

The position generally given to the germ of the permanent organs with reference to the deciduous, before the eruption of the former and the loss of the latter, is at the age of three or four years as follows: We give Delabarre's description of their position in the inferior maxillar.

"Near the symphysis, perpendicularly, and deeply underneath the temporary incisors, whose roots at this period are incomplete, we shall find the crowns of the central incisors of replacement.

The lateral incisor is behind, situate obliquely from the outside of the inside of the jaw, and covers a third of the posterior labial part of central incisor, and about half of the cuspid, or canine. This last is situated lower, more deeply, and further on them than the one just mentioned, and lies obliquely on the medial line, so that the three teeth form a triangular group, resembling that which we make with our last three fingers, in touching an angular index, bring thus the middle one above the rank.

At a little distance from the cuspid and immediately between the roots of the temporary molars, we find the bicuspides enveloped in their membranes, an appendage of which is carried backward to reach the germ, so that the bicuspides appear to be covered by the crowns of the milk molars.

Each kind of teeth thus ossified, can be distinguished by their points ; the incisors may be known by the three small tubercles that surmount the cutting edge of each, the cuspides by one alone, which forms the summit of a cone, the bicuspidi by two ossified points and the molars by four. As ossification gradually covers the pulp or dental ganglion, their points are united, and form a sort of chapeau that may be easily detached, though intimately united to it, but by vessels of so delicate a nature that the least effort breaks them.

We may understand the order in which each series of teeth is placed, by taking, for a comparison, the ellipsis described by the gums ; then drawing in our imagination three horizontal lines upon it, which shall be parallel to it, and pass over the summit of the teeth in ossification. At four years after birth, we shall find the central incisors upon the level of the second molars, the lateral incisors upon that of the first molars, and the bicuspides, while the cuspid occupy the lowest line. This is worthy of our special notice.

These two classes of teeth, the temporary and permanent, are, therefore, developed at nearly the same period ; but it is only when the first adorns the mouth of the child, that nature directs all her efforts to those that are to succeed them.

This attentive anatomical observation has not only shown us that the crowns of the teeth are formed at a very early period, but also how, from the time of their manifestation, they take their transverse dimensions, such as they should have through the whole course of life, and that the portion of the circle, which the six anteriors occupy in the jaw is at first of very limited extent, in order to allow them to be arranged at the side of each other.

Nature has so arranged or disposed of them, that each covers about one-third of another, which is precisely such an arrangement as we observe in the tiles upon houses. This disposition gives them such an obliquity, that supposed lines traversing their greatest diameter would cut the maxillary bone obliquely.

This arrangement of the teeth is found in all jaws. It is symmetrical, it is constant, and may be observed in all young subjects. It is a law from which nature never can and never does depart. It is, in short, an ingenious means employed by her to supply the want of space.

Many writers either have not appreciated the importance of these imbrications, or have not sufficiently studied on different subjects, what they have pleased to consider as irregularities resulting from a mal-formation of the jaws. Many mistakes in practice have resulted from this error."

We confine ourself at present to the arrangement of the teeth in the inferior maxillar. The change in the position of these organs in the superior is relatively not great, and hardly requires separate description for the present discussion.

We pass over also a few remarks in relation to the development of the two sets of teeth suggested by the remarks of Delabarre, and come, at once, to consider the consequences resulting from the too early loss of the deciduous organs. We must bear in mind the arrangement which has been given, the central incisors being on a horizontal line with the second molars. These are, of course, the permanent organs of which we are speaking.

We have next, a horizontal line, a little lower down, and on this line we have the lateral incisors, the first molars, and bicuspids; and still a little lower, we have the cuspides, and these, as Delabarre remarks, lie obliquely on the medial line.

With this view of the organs before their eruption, and also before the loss of any of the deciduous set, we are prepared, first, to ask what purpose do the deciduous organs subserve, independent of their use in the mastication of food? or does their presence have any effect in controlling the position and direction of the permanent teeth?

We think there can be no doubt of this, first, because they are necessary to the continued expansion of the alveolar arch; and, second, when lost they disturb that arrangement of the permanent germs which an all-wise Providence has selected as the best.

Their too early removal may destroy that passage for the eruption of the permanent, which the gradual destruction of the roots of the deciduous gives. Or, as Delabarre suggests, the *iter dentium*, which appears to be a natural guide for the passage of permanent organ, may be torn away, and the tooth left to seek its own exit through the gum, or ever remain imbedded therein. And before the crown of the permanent has ossified, and the deposition of enamel has taken place, the sac and germ may be entirely destroyed.

The roots of the deciduous organs appear to be necessary to keep somewhat separate the germs of the permanent; and hence their early loss occasions the approximation of two or more of the permanent, and their alveolar processes being arranged according to this new position, the most difficult cases of irregularity occur. The new alveolar border supplied for the reception of the permanent organs, can not take that position desired, when the roots of the deciduous teeth have been removed before the advance which has been made by this operation of the economy demands it.

In this whole operation of first and second dentition, there is evidently a coöperative dependence (if we may be allowed the expression), a mutual co-laboring of each function; and this can be seen as early as the fourteenth week of utero-gestation, when the cavities of reserve are thrown off from the inner operculæ of the follicles, formed for the reception of the deciduous germs.

We will now more particularly notice some of the bad effects of the too early removal of the temporary teeth, and also explain what we regard as the indications for their removal.

The first and most common case that presents itself is the removal of the lateral incisors, to give more space for the permanent centrals, which appear to be forced within the circle. For a time the removal of these teeth may appear to have the desired effect, yet the mischief lies buried beneath the gum; for the root of the lateral incisor separates the germs of the lateral and central of the permanent set, and it being removed, the germ of the permanent lateral, which is on the line a little below, drops forward, as it advances, into the space thus made, and takes the very position occupied by the deciduous ones. If now the tardy eruption of the cuspidati should give room for the permanent laterals, it will be at the expense of all the space designed for the former; and, as the bicuspids usually come in place first, there is no place but within or without the circle for the cuspidati. We have here the ordinary process by which is obtained what is vulgarly called a "snag tooth."

The absorption of the roots of the deciduous teeth is generally accomplished just in accordance with the wants of the permanent organs, and forms the most natural opening for them. It should, however, be borne in mind that the cavity of reserve, which contains the germ for the tooth of replacement, is attached to the inner lid of the follicle, and that, from this position, the permanent organ would most naturally be drawn to seek an opening through the gum, pointing a little inward. This with the incisors is especially the case, and hence, too, that carneous body interposed for the destruction of the roots of the deciduous teeth, and which appears to be carried forward and pressed to the root by the advancing teeth, is held rather against the inner portion of the fang, and this is removed first. We thus find the outer half of the deciduous root sometimes almost perfect, while the inner is gone. This may hold the tooth apparently quite firm, and would appear to say, "I am not ready to give up my position yet." But if we examine the mouth, we will find on the edge of the gum, at the lingual neck of the tooth, a bulging up, showing that the permanent tooth is coming through. We now have here an indication for extraction.

We have selected this starting point of second dentition on which to predicate the most of our remarks; for at this period, perhaps more than at any other, the solicitude of the parent is most observable; and at this period are we more importuned than at any other to commence a practice which would certainly end in increased difficulty.

Parents see a little tooth, soon to be lost any how, just in the way of the new central incisor, and, by comparing the space and the size of the tooth, feel sure that more room must be had, and either out with the tooth, or go to the dentist and insist on having it removed. Unfortunately this request is too often complied with.

It may, however, be asked, are there no conditions rendering the extraction of the deciduous lateral incisors, to give room for the permanent centrals, necessary? We believe not. At least we should wait until the period for their natural shedding, before we resort to such treatment. We would first see what nature would effect for herself, and give her as much time for this as the nature of the case demands.

In forming our diagnosis, as it regards the extraction of these teeth, we can not be so much governed by the age of the child, as the period when the first teeth were shed, and also other conditions which present themselves. Suppose a child is presented that has just erupted the central incisors, and it is eight, or even nine years old. Well, because our books tell us that the laterals are shed from seven to nine, it would be no excuse for their removal. We should recollect that the first being tardy, the others may be alike backward in making their appearance. This will generally be the case. The question, therefore, should not be, how old is the child, but how long since such and such teeth were erupted. We have no doubt that much mal-practice results from this oversight.

Decay of the deciduous molars often takes place before the eruption of the permanent incisors; and their occasional loss thus early in life has pointed out a mode of practice far preferable to the too early removal of the lateral incisors, or even cuspids of the deciduous set.

To illustrate this, we present one, of numerous cases of a like character. Miss M., between seven and eight, whose inferior central incisors have made their appearance fully developed, but the laterals were removed to give them room, has, on one side, the deciduous cuspid and permanent central incisor stand almost touching each other. On the other, the space is about two-thirds of that previously occupied by the lateral incisors. This is in consequence of the removal of a deciduous molar on this side, a year or two previous, which had been aching. Here the space has been kept up by the removal of the molar; but increased size of the alveolar border has been lost by the loss of the lateral incisor.

If, therefore, the case absolutely demands the loss of a tooth at all, we prefer to remove one of the molars. If the question was asked, which one I would remove, I would answer, that which was giving pain or trouble, or that which, by partial looseness, showed symptoms of being first shed.

This practice is not likely to produce any special irregularity of the permanent bicuspids. If such is the result, it is far better here than in the front teeth; and if so, the loss of one would likely be of service to the preservation of the dentine. Should the first permanent molar be decayed, which is very likely, its loss would repair the irregularity of the dentine.

We would, however, not advise the injudicious extraction of even any of these teeth, to relieve a crowded condition of the incisors. We prefer waiting until these are well erupted, and it is evident they can not make room for themselves.

That practice which merely takes cognizance of one or two present and palpable difficulties, having no reference to collateral effects which must flow from them, is not much, if any, short of quackery.

Mr. President, the immense field of cases which lies before us, in considering this subject, we leave for more accurate description, by gentlemen well qualified to do it ample justice.

" THE FILE."

No instrument employed by our profession has been so effectually cursed by those, both in and out of the profession, ignorant of its proper uses, as the file. In fact, it was for a long time considered, by a large portion of almost every community, the very " Shibboleth " of destruction to the teeth. But notwithstanding the odium cast upon it, men, with honesty of purpose as their motto, continued to use it; and now its utility is acknowledged by most communities, by permitting its use upon the teeth whenever their dentist thinks it is required. But this is not universally the case. There are still some benighted spots, that have never enjoyed the blessing of an honest man, *educated* in the dental profession. Such localities are generally prevented from having such a man, by half-a-dozen or more *excuses* for men, who travel over the country and solicit work—doing it so cheap—it is " dogged cheap," to every body except the man that pays for it.

In such a community, if the judicious operator attempts to do his duty, by making use of the file to any extent, the patient shrinks back with " holy horror " at the very thought of it: and the oft-repeated absurdity "of a whole denture having been lost because one tooth had been filed" is hurled at him with defiance. Truly such people need our sympathy, yet still it is not much better than " throwing pearls before swine " to extend it where *blissful ignorance* reigns supreme. But these things are " all in a man's life time," and are rather to be looked for in " the course of events." The exertions of a good operator, together with the touchstone of time, will dissipate them forever.

In this world in general, as any thing is good is it liable to abuse. The file and cutting instruments are not an exception to this rule by any means. We must, therefore, use them with clear judgment, and with honest convictions that we are putting the teeth we are operating upon in a better condition to resist decay, than could be done by any other treatment. If a tooth needs filling, it will not do for us to catch up a file and cut away, with no other object in view than simply gaining room to fill it; but we must examine all the surroundings before we begin. We must note the relative position the teeth sustain to each other, as they stand, before we begin to operate, and ascertain, if possible, how much influence such position had in the production and progress of the decay. We must form an opinion as to what the benefits accruing to these teeth will be, provided they shall be cut in this, that, or the other manner. We must also consider the habits of the individual we are to operate for, whether he or she will be likely to pay any attention to cleanliness of the teeth after they shall have been filed, or not. But above all things must we consider the physical characteristics of the teeth themselves. Every dentist should have the different classifications of the teeth fixed in his memory, so as to be able to decide at once as to the particular class to which any presented may belong, and thereby be able the more readily to decide upon their ability to resist decay. We will illustrate the uses we make of the file and cutting instrument (we consider these instruments together, because we almost always use them both upon the same tooth), upon two classes of teeth.

First, we will take that class which is considered the best that human flesh is heir to, viz: those in which the phosphate of lime largely predominates—whose crowns are short and thick, and the diameter of whose necks is almost as long as their cutting edges. When such teeth are presented for the removal of superficial decay, we do not hesitate to use the file and cutting instrument until we have removed it all. We do not leave a shoulder at the neck (although it might be done with more safety in this class of teeth than any other), as some say they do, for the reason that we do not consider that decay which is *superficial* requires enough filing for its removal to form a shoulder. We recognize that decay only as superficial which is confined to the enamel. The very moment, in our opinion, that the dentine becomes softened, then the decay ceases to be superficial. When the decay has progressed too far to be recognized as superficial, we prefer doing as Dr. Forbes, of St. Louis, says he does—throw the responsibility upon the patient, and not lull him into apparent security by filing the tooth. In removing the decay, we file the surface of the tooth rounding, leaving it as near the shape it had before decay began as possible. It is reasonable, that a round surface will be less likely to retain foreign substances than a flat one ; especially will it be so if there are two such surfaces placed together. But the whole procedure thus far will be suicidal to the teeth filed, unless the surface be left perfectly smooth and polished. If this class of teeth require filling, we file away until we get room enough to manipulate with ease. In shaping the cavity, we are careful to have points for retaining the filling in those parts of it next the neck of the tooth and the cutting edge.

After consolidating the filling properly, we file off the edges of the tooth and the gold all together, so as to leave a rounded surface, as above described in the case of superficial decay. We leave a shoulder at the neck of this class of teeth, when we prepare them for filling. The points for retaining the filling, noticed above, are worthy of note ; because, if they were located at any other part of the cavity, there would be danger of injuring them with the file while giving the tooth a rounded finish, and thereby endanger the integrity of the filling.

The second class of teeth which we wish to notice must be approached altogether differently. We refer to that class which is characterized by long, slender crowns, white color, and less density of structure than the one we have already noticed. They are also much broader proportionally at the cutting edges than at the margin of the gum. They rest against each other only near the cutting edges, forming spaces below this point of contact of an inverted V shape.

When such teeth are to be operated upon for the removal of superficial decay, and that decay is below the point at which the teeth rest together, we use a sharp-pointed file, with one side flat and the other convex—the convex side being the cutting one. The natural spaces between these teeth will generally allow the motion of such a file without destroying the enamel where they rest against each other ; but if the space is not large enough to admit the file, we obtain such space by wedging, then file the decay away, polish the surface, and allow the teeth to come together again. But if the decay has attacked these teeth at the point where they rest together, we file extensively, cutting away even more than is really necessary for the removal of the decay. In this operation, we direct the file so as to cut mostly from the lingual side of the teeth. We only remove enough from the labial side to obtain an edge strong enough to bear the manipulation of the burnisher in putting a polish upon it. We follow about the same plan when these teeth need filling, but carry it as much farther as is required for performing the operation properly.

This class of teeth, as is well known, always come together after they have been operated upon, let the operator file as he pleases, unless all in the front part of the mouth be filed at the same time. Therefore, both in the removal of superficial decay and in the preparation for filling, we bevel off the lingual edge of the filed surface, making it rounding ; but the labial edge we leave almost square, so that when the teeth come together again, only about a line and a half of the labial edge of each tooth will be in contact with the other, and that near the cutting edge. When the teeth have assumed their places again after having been filed in this way, the spaces inside between the beveled edges, and also between the teeth themselves below the point of contact, should be large enough to allow the tongue, brush or toothpick to remove everything that would be likely to induce decay again.

Of course it will be understood that what we have said refers only to the approximal surfaces of the incisor and canine teeth.

At the last meeting of the American Dental Convention, the discussions upon this subject took a broad and general direction, irrespective of the different classes of teeth which are met with. We hope that the Executive Committee, when laying out work for the next meeting, will classify the teeth, and call upon the members for their mode of operating with the file and cutting instrument upon each class respectively.

LANCASTER, OCT. 1, 1859. J. G. HAMILL.

AN ALARMING CASE OF HEMORRHAGE, FROM THE EXTRACTION OF TWO MOLAR TEETH.

BY W. H. SHADOAN.

Miss E. L., aged 17 years, of scrofulous diathesis, called, on Monday, August 28th, to have some teeth extracted. On examining her teeth, I found them badly decayed. She said she wished several removed if she could endure the operation. I commenced by removing the first inferior molar of the right side. She did not complain much, and concluded to have another extracted. Then took out the antagonizing tooth of the upper jaw. She concluded not to have any more extracted at that time, and well enough she did not, as it turned out. She went home a short distance in the country, about half a mile. The hemorrhage continued until Wednesday, when it entirely ceased, but on Thursday about noon, the hemorrhage broke out from the upper socket, and bled so alarmingly that the family became frightened, and sent for the family physician; he being rather unwell, and not thinking her in danger, did not go, but sent her some tannin, told them how to use it, and insisted that they should send for me. They did not send for me, however, but let it run on until 7 o'clock the next morning, when the young lady came to me herself. I examined the parts, and found that the blood was emitted from the posterior-palatin edge of the socket. I first tried tannin, then tannin and morphia, mixed with tincture of myrrh, which seemed to stop the blood for a short time. I then took of tannin about ten grains, of sulphate of morphine about ten grains, dissolved with oil of cloves; took a small portion of cotton, and saturated well with the mixture, and placed it in the orifice. In a few moments the hemorrhage had entirely stopped.

She in the mean time had lost so much blood that she was getting quite weak. She started home, and on the way the bleeding commenced from the inferior socket, and in a few hours she was reduced so much that she could hardly sit up

About half-past 1 o'clock she came in again, and it was with difficulty that I got the hemorrhage stopped at all. I began to think that I was going to have trouble with it. I tried the remedies as before, at first, to no avail, but at last succeeded in getting it checked, in the evening, with tannin, creosote, morphine, and opium.

Sulphate of copper is very good in such cases, but I did not use it in the case above referred to.

THOUGHTS ON FANG FILLING.

BY GEO. WATT.

In the July number of the "Register" we made a few remarks on the subject now under consideration, which have already given rise to some discussion. The article is, perhaps, carelessly worded, or, if not, it has been carelessly read in some cases. The former view is likely the correct one, as we write such with more haste than we do our regular chemical articles.

Some have inferred that we maintain that the orifice in the apex of the fang will be uniformly closed with osseous matter. Our remark does not warrant the conclusion. We simply said, "As to the foramen in the end of the fang, nature closes it up better than can be done with gold." But this is true whether it be closed with osseous or fibrous tissue.

Dr. Broch, in the *American Dental Review*, in speaking of our method, says he "inserts a little cotton, with creosote, in the nerve cavity, and plugs over this." Dr. B. should remember, that this is Dr. Atkinson's "thunder," approved, however, by us at the Niagara meeting, according to all the "reports" we have yet seen, except the "*Register's*," because the creosote forms a "carbonate," by uniting with the cotton!

Do the editors of the various journals think that I regard *carbonic* acid as the active principle of creosote? or shall I conclude that they don't know that pure creosote is *carbolic* acid? or shall we blame it all on the poor printers?

But Dr. B. suggests that the practice is not venerable, and Dr. McQuillen, in the "*Cosmos*," hints at the same thing. And as we reported recent cases, only there is a shadow of a foundation for their inference. The object aimed at was to report only such cases as we could see or hear from frequently, and keep the profession posted up, from time to time, on these. We are again ready to report on them, having seen all but No. 9, the present week. Will the reader turn to the first article of the July number and compare?

CASE 1.—As it was—neither pain nor abscess.

CASE 2.—All right.

CASE 3.— Do.

CASE 4.—No uneasiness.

CASE 5.—Slight periostitis last week in one—the other still easy and all right.

CASE 6.—Has never been uncomfortable.

CASE 7.— Do. do. do.

CASE 8.—As last reported.

CASE 9.—Patient died in August—the tooth right till then.

We will report no new cases at present; but will remark in this connection, that the mode of practice under consideration is not *very* recent with us. At a meeting of the Mississippi Valley Association, in 1857, perhaps, we mentioned it as our favorite method, and it was not new then.

But Dr. B; if we understand him, agrees to leave some dead matter in the canal. The "extreme end" is not a part of his creed. He says, "The leading law of success, I believe, is the complete removal of pulp and lining membrane as near as possible to this extreme point. Do this, and you need not make the tooth a charcoal factory, or a tan pit. It will do well, even if you can not fill it to the point extreme."

Every operator will admit that in some cases the "extreme end" can be readily reached. In these, prolonged treatment is not called for. But the practice we described in the July number is based on the assumption that it is not practicable to thoroughly cleanse the entire canal. And this treatment does not make "a charcoal factory" of the canal, and, if it did, it would be no objection to it, as charcoal in the cavity could do no harm.

But after all, what is the real difference between Dr. B.'s treatment and ours? He fills a part of the canal; we fill none of it. He fills over putrescent matter, if he can't remove it; we arrest and prevent its putrefaction. He cleanses out the canal as well as he can, and we do—the same.

Dr. B. does me injustice in stating that, according to my article, fang filling became fashionable in 1853. I merely say it "has been fashionable since, and probably was before," and state in evidence of the latter idea, that "a majority, if not all the members present, advocated filling the fangs."

In conclusion, now, we would state that, though in speaking of the treatment under consideration, we have called it "our mode," we do not wish it to be understood that we claim it as peculiar to us. We are glad that others have investigated the subject, and arrived at the same conclusions.

October 1, 1859.

Correspondence.

SANDUSKY, OHIO, Sept. 19, 1859.

MESSRS. EDITORS:—Having read in the last Register the very modest and unbiased statements made by M. Loomis, before the Convention at Niagara, concerning the superior merits of his patent "Mineral plates," they being as he declares, the "ne plus ultra" of this department of dental science; "so entirely pure and clean in fulfilling its purpose, and fulfilling that purpose so well, and *never* wearing out or giving way." And that "having tested it in practical operation for six years, he knows not a single objection to be brought against it other than that it is artificial."

Unfortunately for the reputation of the "ne plus ultra" plate in this region, the talented inventor resides at too great a distance to be personally employed by the admirers of that style of work. Not that we are by any means destitute of that great blessing, Mineral plates in Northern Ohio, indeed, are quite common; but they seem to be of a kind which differs widely from that described as "fulfilling its purpose *so* well, and never wearing out or giving way." So much so indeed, that many of these plates persistently refuse to perform any useful purpose whatever. They can not be persuaded even to "stay in," to say nothing of the more desirable purposes of mastication.

Moreover, they are the victims of every accident. A blow or a slight fall breaks them, and when this occurs, the truth of his declaration "that where this plan is adopted, repairing will be abandoned in toto," will be felt in its full force and beauty; for repairing broken mineral plates is simply impossible. In this respect, I concede that this work has the advantage over all others; for while it spares the dentist the trouble of mending his broken work, it delights his pocket with the price of a second set; a peculiarity which will tend to elevate it, I doubt not, in the estimation of such of the profession as have had an unhappy exposure in that way.

Again, the mineral plate (what I have seen of it) is thicker than gold, continuous or Vulcanite; and it would seem must be so, to possess the requisite strength, consequently more clumsy and disagreeable in the mouth.

Now, I have no interest in any patent material whatever, save "Cheoplasty" (which I do not use, and wish I never had), and may, therefore, fairly be supposed as impartial at least as the inventor and manufacturer; and from all that I have seen and learned in regard to this kind of work, I consider it in most respects inferior to the Vulcanite. There are difficulties in its manufacture which do not exist in the latter, and when they are surmounted, it is no better. It is not every good practical dentist who can carve a tooth or a set of them artistically, though he might mount them on a plate unexceptionably. Again, mineral plate shrinks in baking, and shrinks unequally as the thickness of the plate is unequal, and this difficulty can not, I conceive, be entirely overcome, in which case it must be ground to fit—a tedious and difficult operation. With the Vulcanite, on the contrary, all that is necessary to secure a perfect and exquisite adaptation is to get a *perfect* impression; that obtained, the result is certain, and for the rest, its advantages, as compared with the mineral, are as follows:

1st. It is as light, with less thickness and greater strength;
2d. It is as cleanly;
3d. If broken, it may be repaired;
4th. It can be afforded as cheaply.

In short, it has all its advantages, without its defects.

If, as the inventor says, there are those "whose pecuniary interests are adverse to the introduction of his work," it is not, I opine, for the lack of skill to construct, neither is it the "clog of Letters Patent," but rather its inferiority to other methods and materials. Whenever it can be shown to be a better and cheaper work than any other, it will be the interest of every member of the profession to introduce it, and it will be done, and by none with greater alacrity and pleasure than the subscriber. EDGAR J. WAYE.

* * *

PHILADELPHIA, Oct 10, 1859.

MESSRS. EDITORS:—Since my last communication to you, I have, after attending the Convention at Niagara, spent several weeks in the country upon a farm, in the pursuit of health, and while there, was painfully impressed with the ignorance and consequent neglect on the part of the farmers in regard to their teeth. I was astonished to find that more than half of all I met, including many of both sexes, just reaching their majority, had badly decayed teeth, or what was worse, no teeth visible at all, presenting an unsightly, and in some cases, a disgusting appearance.

Now, how shall we account for the early decay of the teeth of a class of the community who live naturally, enjoying full bodily health, with good appetites and good digestion, with plenty of out-door exercise to develop and strengthen the entire system? Of one thing, however, I am quite sure, which is, that habits of *cleanliness of the teeth* would do much toward preserving them, and likewise render their owners more companionable; a tooth-brush is rarely heard of among them. But how to reach them, to impress upon their attention this great necessity of *cleanliness*, is the question, and but one way suggests itself to me, which is this, that every village dentist communicate to the local newspaper, short but plain and attractive essays (free from technicalities) upon the importance of preserving the teeth, their use in the animal economy, with some general directions as to the use of the brush, etc. This should all be free from anything of an advertising character, and thus have more weight, and the more likely secure publication in the newspaper, as a matter of general interest.

Now, all this done from pure motives of good to the public, uninfluenced by personal interest or aggrandizement, *must* prove beneficial to those by whom the writer is surrounded, and he be amply repaid eventually, as surely as the farmer reaps where he sows.

This subject might be elaborated, but I think enough has been said to make it perfectly intelligible, and to show that by the plan proposed, the teeth of the young of the present generation throughout the agricultural districts, and especially in the newly settled countries, might be greatly improved and many preserved; the dentist make himself more useful, both as practitioner and writer, and ultimately our journals be better sustained by contributions (for it will be observed the plan results in the education of practitioners as writers), and thus the profession of dentistry accomplish more fully its important mission, by extending the field of its usefulness, and by eventually bringing all under its wholesome influence.

Surely such a result is desirable, and I as firmly believe may be brought about, to a great extent at least, by the means proposed. If it should strike you favorably, give it the sanction and weight of your editorial influence.

If not considered heretical, I would suggest that the last meeting of the American Dental Convention was not quite *up* in interest to any one of the four previous meetings. This I think, will be noticed by a perusal of the reported discussions, and more fully, by comparison with those of previous meetings.

This evidence of declining interest (for such I take it to be) gives additional promise of success to the new organization, "The American Dental Association," in plainly indicating the necessity for a more thorough and substantial organization—one having more ties and attractions, and giving promise of more positive and permanent usefulness than can be hoped for from one of the—I may say—ephemeral character of the American Dental Convention.

I observe New York has given birth to another dental organization. This must be somewhere about the fourth or fifth child of the same parentage, none of which, however, long survived their birth. May this last be spared to cheer its so often and so sadly bereaved progenitors, and prove a blessing to them and their posterity.

I notice with pleasure the absence, to a great extent, of exhibitions of dentistry from our Pennsylvania State Agricultural Fair.

There were but three exhibitors in this department, one of porcelain teeth of very ordinary quality, one of mechanical dentistry, gotten up for show, and one of the porcelain plate process. The Committees on "Stallions," or imported stock, are hardly the men to pass judgment on dental matters. Exhibitions of dentistry at such places should be frowned down as humiliating, as well as detrimental to the profession.

Of the movements of some of the profession, I notice the return of Dr. Theodore S. Evans to this country, after an absence of some eight years. His visit here will be brief, and is one, I suspect, of a very tender nature. I note also the departure of Dr. W. M. Wright, of Pittsburg, for London, where he designs practicing his profession for a short time, at the solicitation of an influential friend and patron, a resident of London.

Such events are highly complimentary to American dentistry, and in this instance is peculiarly appropriate and well merited. Yours, O. U. C.

* * *

Madison, *Oct.* 5, 1859.

Messrs. Editors:—In reply to Dr. Hunter, I shall use no Billingsgate slang. The term *lie* sounds to me rather unprofessional, and I hope, for the credit of the profession, as Dr. Hunter is somewhat *noted*, it may be set down as a slip of the pen; if intentional, it shows a *bad* spirit, or a desperate cause

Remember, Doctor, "Whom the gods destroy, they first make mad." Now, keep cool, for you seem to be simply endeavoring to protect the profession from imposition, and too much zeal might leave the supposition of *monomania*, to say the least.

My dear Doctor, I was well aware you could obtain my specifications, and I entertained no doubt but that you would do so, when I penned my article. You have appealed to the documents, and to the documents let us go.

Your copy from the specifications is correct, and from that you will see that I make but two claims, *one for mounting teeth*, the other in *forming the rim.*

My patent reads: I "take gold or silver, or both combined, *properly prepared, by precipitation or other modes, with mercury.*" I do not specify how I prepare my amalgam. Success depends entirely upon this point, it being *properly* prepared. How *is* it prepared? Dr. Hunter has not told us. Whoever attempts to work amalgam as he has described will have his labor for his pains. It can be prepared but *one* way, while the manipulations may be performed in various ways, without invalidating the patent.

In my specifications I simply state that I use gold or silver *properly* prepared, leaving just enough untold to defeat just such efforts as you are now making. Can you pardon me, Doctor, for mistifying you a little? I admit that 'tis great "*impudence*" to dare know anything or do anything not already done by Dr. William M. Hunter.

You seem to be working for the interest of the profession, and your disinterested efforts will be *duly appreciated* by those who know you *best.*

If my work is such a "*worthless humbug*" as the Doctor describes, let it be shown in such a manner as to remove all doubt, and then let it be condemned by all—a consummation to be wished by you, I doubt not. To further the exposition of its true character, and place the whole matter in the right light, I now make you two propositions:

First, That we each make an upper set of teeth on silver base, using teeth of our own selection, of Jones & White's manufacture.

You make yours as you are in the habit of making for your patients—the work to be done in the best manner you or all your workmen combined are capable of doing. You shall use no amalgam, *soft solder or tin.* I will make mine as I am in the habit of making for my patients, as I instruct those I sell to, and in a manner covered by my patents. I will flow no solder through the amalgam, to make it more dense.

At the appointed time, which may be designated by yourself, both pieces to be placed in the hands of Dr. Wardell, of Cincinnati, or such other person as he may agree upon, subject to inspection for the space of four weeks by all dentists who may be pleased to call, each giving his opinion of the two pieces, in point of *strength,* beauty of construction, cleanliness, neatness, and every other point calculated to make a perfect piece of work.

Neither piece to be marred or injured in any way, and neither you, nor I, nor your partners to see the other's works. The strength shall be tested by Dr. Wardell or his substitute, should this selection be made.

If the majority of the dentists pronounce my work the best in the features mentioned, I shall take both sets, you to acknowledge in as public a manner as your attack, that your charges are unjust.

If, on the other hand, your charges against my work are sustained by the majority of dentists examining the two pieces, you shall take both pieces, I will throw up my patent, and publish to the world.

If you object to this test being submitted to the dentists of Cincinnati and such others that may call to examine them, the pieces may be sent to either of Jones & White's dental depots, and submitted to the judgment of the dentist of the city to which they may be sent.

I specify a silver base, simply because it is less expensive, but I think gold works much better.

Now about its cleanliness. You say in your first article that it admits the fluids of the mouth, becomes *putrid, offensive*, and *filthy, beyond description.* To test this point, I propose that you and myself procure each a set of teeth on gold base, worn not less than three months, from some one of our patients, whose testimony can be relied upon; your piece made as you make gold plates, mine to be amalgam, both pieces to be taken from the mouth, and conveyed to Dr. Wardell or his substitute, without any cleaning whatever, in such way as to be satisfactory to both parties that the thing is fairly done. He shall cleanse them in simple soap and water, and then remain in his hands for one week for exhibition, that the absolute cleanliness of the two pieces may be determined.

Neither of the two pieces shall, in any manner, be injured, strained or defaced in any way, but returned to their respective owners in the same condition as when procured. The result of this second practical test to be considered in making up the decision as to the general merits of the work.

Such appears to me to be the proper way of settling a professional controversy, and doubtless will be satisfactory to the profession at large.

Now, Doctor, you have my *proposition* before you. If you are a *man*, and honest in professed intentions, you will accept. If you sustain your position, you will have the honor of exposing a great humbug.

If you decline, your true position can be understood by the profession, and the "*Yahoos*" may have the pleasure of holding you up to public gaze in your true character, and *perhaps* I may say something that you will wish had not been said.

N. B. SLAYTON.

A LIST OF THE ALUMNI

Of the Ohio College of Dental Surgery, from its organization to the present time.

AT the suggestion of various persons, we have concluded to publish a list of the graduates of the Ohio Dental College. Inquiries have been made frequently as to who the early graduates were; to answer those inquiries, and in justice to the alumni, we give their names and present location, so far as we can, also the date of their graduation. If there are any inaccuracies, we shall be pleased to be notified of the same, and correction will be made.—EDS.

CLASS OF 1846.

*W. B. Ross,	
B. A. Satterthwaite,	Dayton, Ohio.
*D. P. Hunt,	
A. Berry,	Raymond, Miss.

CLASS OF 1847.

H. R. Smith,	Cincinnati, O.
A. M. Leslie,	St. Louis, Mo.
G. L. Van Emon,	Nashville, Tenn.
P. Knowlton,	Cincinnati, O.
A. S. Talbert,	Lexington, Ky.

CLASS OF 1848.

J. S. King,	Pittsburgh, Pa.
Samuel Griffith,	Louisville, Ky.
J. A Weaver,	Batavia, O.
*B. J. Dudley,	
C. F. Knowlton,	Detroit, Mich.
Y. W. Lewis,	Howell, Mich.
W. H. Goddard,	Louisville, Ky.

CLASS OF 1849.

E. Bray,	Evansville, La.
*A. L. Dwyer,	
T. R. Willard,	Dayton, Ohio.
Wm. S. Chandler,	New Orleans, La.
Amos Pratt,	Henry, Ills.
H. D. Stratton,	St. Louis, Mo.
S. B. Fithian,	“ “
J. H. Andrews,	Yazoo, Miss.

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* Deceased.

Class of 1850.

J. Ramsay,	Springfield, O.
Wm. H. King,	Lancaster, O.
J. Taft,	Cincinnati, O.
J. W. Keys,	Florida.
H. E. Peebles,	St. Louis, Mo.
Wm. Bell.	Elizaville, Ky.

Class of 1851.

E. Buckwell,	California.
John G. Hamill,	Lancaster, O.
J. C. Weaver,	Batavia, O.
J. C. Clark,	Circleville, O.

Class of 1852.

W. S. Burke,	Porto Rico.
W. C. Duncan,	Cincinnati, O.
G. L. Payne,	Xenia, O.
J. C. Whinnery,	Salem, O.
J. A. Herring,	Kosciusko, Miss.
A. L. Dwyer,	Greenfield, O.
M. N. Manlove,	Lafayette, Ind.
J. L. Knapp,	New Orleans, La.
Samuel P. Cutter,	Holly Springs, Miss.
D. Dougherty,	Bardstown, Ky.
C. W. Spalding,	St. Louis, Mo.
A. D. Bigelow,	Cleveland, O.

Class of 1853.

J. T. Irwin,	Cincinnati, O.
J. C. Ross,	Nashville, Tenn.
John Harris,	Salem, O.
J. L. Milton,	Yazoo City, Miss.
H. A. McDaniel,	Nashville, Tenn.
H. E. Eames,	Lebanon, Tenn.
J. M. Lewis,	Quincy, Ills.

J. F. Johnson,	Indianapolis, Ind.
Joseph Richardson,	Cincinnati, O.
C. H. Quinlan,	Chicago, Ills.
E. S. Holmes,	
G. W. Keely,	Oxford, O.
S. D. Muse,	Sharon, Miss.
J. A. Kennicott,	Chicago, Ills.

CLASS OF 1854.

G. Watt,	Xenia, O.
E. Collins,	Connersville, Ind.
*B. N. Freeman,	
M. W. S. Kendall,	Illinois.
E. A. Hermon,	Nashville, Tenn.
A. L. Brown,	London, O.
G. Laurie,	London, England.
M. DeCamp,	Mansfield, O.
J. W. Baxter,	Warsaw, Ky.
P. G. C. Hunt,	Indianapolis, Ind.

CLASS OF 1855.

J. E. Jones,	Dayton, O.
H. Munro,	Lebanon, Ky.
W. A. Cornelius,	
J. Douthett,	Xenia, O.
R. C. Reid,	Anderson, Ind.
*T. L. Waring,	
G. B. Miner,	Milwaukee, Wis.
J. D. Quinlan,	Chicago, Ills.
*A. J. Reeve,	
H. B. McKellops,	St. Louis, Mo.
J. G. Fredericks,	New Orleans, La.
J. B. Newbrough,	

CLASS OF 1856.

A. D. Nevins,	Lexington, Miss.
E. Osmond,	Cincinnati, O.

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* Deceased.

J. R. James,	Volney, Ky.
F. Bell,	Cincinnati, O.
T. Davenport,	" "
C. H. James,	" "
F. Grimes,	Fayette, Mo.
J. F. Mercer,	Canada West.
W. G. Drake,	Aberdeen, Miss.
A. G. Stipher,	Kentucky.

CLASS OF 1857.

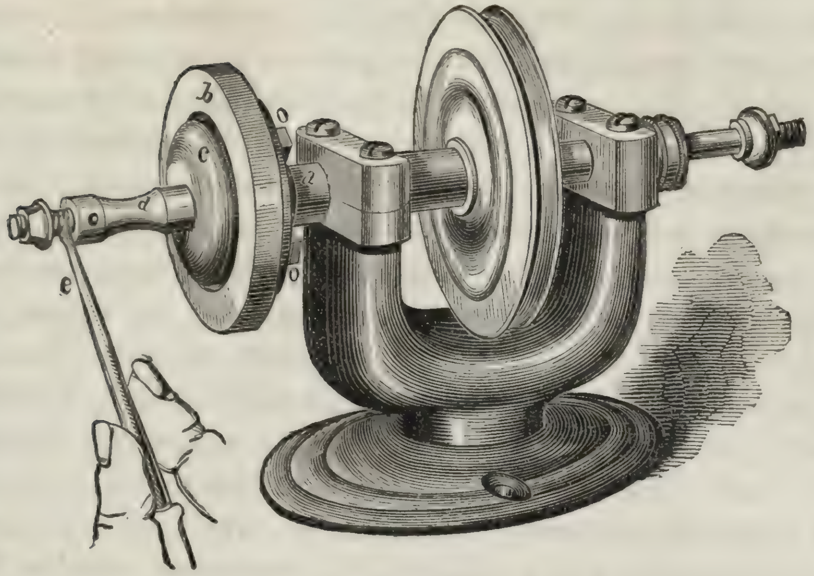
G. W. Hall,	
H. A. Smith,	Cincinnati, O.
Chas. J. May,	Illinois.
Chas. Silsbee,	
A. G. Phillips,	Ravenswood, Va.

CLASS OF 1858.

C. C. Dills,	Peru, Iowa.
M. W. Wortman,	Hamilton, C. W.
W. A. Ross,	Covington, Ky.
S. L. Bracy,	Raymond, Miss.
C. W. Robinson,	Greenfield, O.

CLASS OF 1859.

L. B. Hatch,	Lebanon, Ky.
J. B. Doughty,	Mississippi.
J. Ingalls,	Wisconsin.
J. B. Knisely,	Decatur, Ills.
G. B. Lenoir,	Monticello, Miss.
W. B. Ward,	Camden, Ark.
E. Ruth,	Covington, Ky.
O. Willson,	Aurora, Ills.
S. Wardell,	Cincinnati, O.
W. H. Atkinson,	Cleveland, O.
W. W. Allport,	Chicago, Ills.
E. Taylor,	Palmyra, Mo.



SAINT JOHN'S ADJUSTABLE DENTAL LATHE.

The above cut represents an adjustable dental lathe, invented by St. John, of Bellefontaine, Ohio. The principle is good and very simple withal. The object is to adjust a bur or stone, or anything to be turned, to run perfectly true, though it may be eccentric upon the shaft. The mandrel *a* is adjusted upon a head and bearings of an ordinary structure; upon one end of the mandrel are collars and a screw, to attach a stone or brush, upon the other end is the adjustable center, which constitutes the principal peculiarity of this lathe. It consists of the circular plate, or disc *b*, attached firmly to the mandrel *a*, having on its face an annular depression, which receives the centering plate, *c*, which is about one-fourth of an inch less in diameter than the depression. To this centering plate is attached the shaft *d*, prepared for receiving upon its point a corundum wheel, or bur. There are four centering shafts accompanying each lathe, to which may be attached brushes, corundum wheels, burs and saws. There is a small chuck, denominated the watch-maker's pivoting chuck, which may be used by the dentist for holding fine drills, etc; it is fastened to the centering plate like the shaft *a*. To adjust the pivots nicely, the centering plate *c* is permitted to move in the disc, but is so pressed in the facial flanges by means of the two spiral springs, within the plate *b*, and behind *c*, that to whatever point it is placed, it will remain until it can be permanently fastened, by the two screws, in the posterior part of the main plate, *b*. For adjusting anything upon the shaft, loosen the centering plate by turning back the screws, *o o*, and using the centering tool, *e*, as shown, when the lathe is in motion, upon the periphery of that which is to be adjusted, then tighten by turning in the screws *o o*, which tightens the whole. The wheel or bur will then run perfectly true, so far as its circumference is concerned. Any lateral variation must be corrected in putting on the corundum wheel or bur. This lathe is a very valuable addition to the dentist's laboratory, and one that none should be without. It may be attached to any ordinary lathe. T.

THE METHOD OF PUTTING UP THE VULCANITE BASE FOR DENTURES.

Procure the most perfect impression, then make a light model of good plaster, then adapt to it a common gutta percha plate—this is used to obtain the articulation—then take up the antagonizing models in the usual way, then arrange the teeth upon the gutta percha plate. Bend the pins of the teeth, so that they will hold firmly in the rubber, then build on wax, where it is designed the rubber shall be, dress it smooth. Now place the model containing the teeth and plate in the bottom part of the iron flask, and fill up with plaster round the middle; trim it smooth, then varnish and oil it. Then put on the upper part of the flask, then fill completely with plaster, put on the top, and then with the clamp, screw it all together. After the plaster has set, separate the flask, warm it, and remove the gutta percha plate and wax from the cast and from about the teeth. Then warm the counter model, which retains the teeth, to a hundred and fifty, to one hundred and seventy-five degrees. Then proceed to pack in the rubber, in small pieces, slightly warmed, till the counter mould is more than filled. Now cut channels in either half of the mould, three or four in number, from the mould to the outside of the flask, through which the redundant gum may pass. Now put the flask together, put on the clamp, and screw down gently, make it quite warm, and close the plate perfectly with the clamp. It is now ready to go into the vulcanizing chamber.

DIRECTIONS FOR USING ROBERTS' VULCANIZING APPARATUS.

This apparatus being the most simple of any now in use for vulcanizing rubber or gutta percha, is more easily managed than those more complicated; yet some little direction is required to enable a beginner to use it with facility. And first, the water chamber should be almost filled with water, at the beginning, then the plates put in, and the work put in on these. Then the top put on and screwed down as tightly as possible, taking care that the packing is good, and properly adjusted. The taps should be screwed down as firmly as possible with an ordinary wrench.

The fire may now be started, and the steam raised in the heater, till the thermometer rises to about 260° within th first half hour, then raise to 290°, during the next half hour, then raise it up to 305° during the next two hours; this completes the operation for the common gum.

For the fine, or recently improved gum, raise the thermometer to 250° during the first hour, then to 290° during the second, and to 320° during the third hour, then to 340° during the fourth, then retain it at 345° during the fifth and sixth hours, which completes the work.

At the expiration of this time, the steam should be let off by the escape valve, the fire put out, top taken off, and the pieces removed. These are cooled down gradually, and the pieces removed from the moulds and finished up.

FANG FILLING.

IT is much easier to *talk* of filling to the apex of a fang than to *do* it. No clairvoyant can inform the operator when the gold reaches the extremity of the nerve canal so as to fill it completely. I have sometimes filled the fangs of teeth, but doubt whether I have ever succeeded in filling them entirely to their apices. Others may succeed better; but probably nearly all the teeth so filled when extracted, as unfortunately they sometimes must be, show that a portion of their nerve cavities was not filled.

Several years ago, while conversing with Dr. Samuel Griffith, of Louisville, on treating teeth that had lost their vitality, or had their nerves destroyed, by removing the membranes, &c., in the pulp cavity, he described a method of drilling a small opening under the edge of the gum to the cavity, in which opening a piece of hickory is to be inserted, and the lower portion of the canal and the cavity in the crown filled, when the hickory is to be removed to allow the escape of any matter accumulating in the nerve canal. A patient in the Dr's chair, inserting a pin in an opening under the gum in the fang of a central incisor, said, "Here is a tooth filled in that way by Dr. ——, of Philadelphia, five years ago, which has given me no trouble since."

My observation leads me to believe that this mode of treating such cases is more successful than fang filling in preventing alveolar abscess.

A. BERRY.

Selections.

SUBMUCOUS INJECTION AS A CURE FOR THE TOOTHACHE OF PREGNANCY.

BY HORATIO R. STORER, M. D.

In a paper read before the Society for Medical Observation in February last,* it was suggested that in certain obstetric cases, otherwise incurable, permanent relief might be had by a modification of the simple and easy process of Alex. Wood. As the remarks referred to were but incidentally made, in connection with a case illustrative of criminal abortion, and as the proposal itself seems to have been new to the profession, it may be worth repeating in more distinct form, and at greater length.

"Pains in the teeth," says Montgomery, "are with some the invariable accompaniment of pregnancy."† "Their effects upon the comfort and well-being of the patient are often very distressing."‡ "After all our endeavors, we shall find ourselves in many instances unsuccessful," "and if not relieved, abortion may result."§

Not to enumerate the long list of remedies that have hitherto been advised for the malady, it is only necessary to state that in certain obstinate cases they are all found unavailing, and that general practice and many writers have been in favor of proceeding to the extraction of a tooth; if which fail, some have been rash enough to counsel the deliberate induction of abortion. These acts, however, must be pronounced unjustifiable, both on moral and legal grounds, which I have elsewhere adverted to.‖

The toothache of pregnancy, as such, is not dependent upon caries, and if for scientific reasons alone, it should not be submitted to the usual treatment. Decay may undoubtedly exist, and in pregnancy caries of the teeth often does progress much more rapidly than at other times, but the affection we are now considering being purely sympathetic and reflex in its nature, dependent directly upon the uterine irritation, can seldom be relieved by the extraction of the tooth, whether this be sound or impaired.

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* American Journal of the Medical Sciences, April, 1859, p. 314; copied by Atlanta Medical and Surgical Journal, etc.

† Signs and Symptoms of Pregnancy, 2d edit., p. 283.

‡ Chnrchill, Diseases of Females, p. 338.

§ Ibid., pp. 339, 340; Campbell, Midwifery, p. 519; Capuron, Mal. des Femmes, p. 357.

‖ North Am. Med. Chr. Review, May, 1859, p. 459; July, 1859, p. 657.

Burns, Blundell and others acknowledge that extraction of a tooth during pregnancy may be immediately followed by abortion—a consequence that might readily be expected from so profound an impression upon a nerve just then in unnatural and excessive sympathy with the uterus; in much the same manner as abortion sometimes occurs in consequence of intentional excitation of the mammæ, whose system of nerves is now allowed to be in intimate connection with the uterine. Be this as it may, however, from the fact of the occurrence and its risk—that abortion may ensue and frequently has ensued directly in consequence of the extraction of a tooth during pregnancy—we are compelled to assert that this very unscientific operation should always be avoided. To the argument that the pain, if unrelieved, might of itself occasion miscarriage, we should answer, even if we had no alternative to propose, that at times this neuralgic pain has suddenly and spontaneously ceased without interference, and that at others, however severely abortion may have threatened, it yet has not occurred.

But if the extraction of a tooth is to be reprehended in such cases, much more is the intentional extraction of the fœtus. The growth and moral tone of society, and the best interests of the profession, have already suffered too much at the hands of rash and meddlesome practitioners, who have thus abetted, however unintentionally, the spread of criminal abortion. We are plain in our statement, but unhesitating, for we believe that in much of the treatment of the nervous complications of pregnancy, whether evidenced by vomiting, convulsions, mania or simply toothache, there is oftentimes on the part of the attendant a carelessness resulting in direct intra-uterine murder—and that by the influence of such example upon the moral sense of the community, the frequency of the intentional crime is increased. The remark we have now made applies with equal force to much also of the usual treatment of difficult childbirth—to recklessness, by what authorities and however defended, in the use of the crotchet, the plug and of ergot.

In considering the real character and cause of the toothache of pregnancy, it occurred to my mind that the operation which has of late been found so effectual in removing neuralgic pains from other portions of the body, would probably prove equally valuable when applied to the gums, and in practice I have found it perfectly successful for this purpose.

CASE.—A. Z., aged 22, applied to me for treatment early in May last. Patient had suffered for several weeks from severe neuralgic pain throughout the left half of the upper jaw, at times lancinating in its character, at others more dull, but never wholly absent. The general health was decidedly affected, as evidenced by the state of the circulatory, digestive and nervous systems. The teeth, on inspection, were all sound; there was no heat or swelling of the gums, no tenderness or increase of pain on pressing them.

Anodynes, both local and general, refrigerants, emollient poultices and counter-irritants were successively resorted to, without benefit. After much solicitation, a tooth was extracted; the patient remained unrelieved. On the following day, no change for the better having occurred, ten drops of the Edinburgh solution of the bi-meconate of morphia were injected beneath the mucous membrane of the gum; the pain ceased instantaneously, and from that moment to the present, a period of nearly five months, there has been no return of the malady.

Should the operation prove insufficient entirely to arrest the pain, I should advise a direct attempt upon the organ causing the disturbance, by local applications to the cervix uteri. These do not seem to have been resorted to for this special purpose, but from the tincture of iodine we might expect the same benefit as in the vomiting of pregnancy; cases of which have lately been reported in this Journal by Dr. Miller, of Dorchester, the treatment referred to not being original with himself. Too much caution, however, can not be used in meddling with the uterus during pregnancy; the employment of the speculum, often enough to be condemned at other times, usually becomes here doubly unjustifiable.

I am not aware that any writer has hitherto proposed to prevent, by submucous injection, the extraction of teeth during pregnancy—and thereby to prevent abortion, resulting either from that operation or from the neuralgic pain; not even does the induction of mere local anæsthesia, by any of the numberless modes attempted, seem to have been thought of for this special purpose. Nor do I know that submucous injection had ever been made use of previously to the case I have related, for the cure of dental neuralgia. It was the opinion of a friend, Dr. Page, at the meeting of the Society to which the subject was originally presented, that upon this point I was in error; but the gentleman has subsequently informed me that the application in the cases to which he alluded, in the practice of a distinguished dentist, was of anodynes externally, to the surface of the gum. Apparently the only instances as yet recorded of the injection of opiates into the substance of the gum, are by a dentist of Edinburgh, Mr. Smith;* and the operation with him was for the purpose of producing temporary local anæsthesia during the extraction of teeth, not for the purpose of preventing their extraction by the cure of neuralgia.

By the copying of a large portion of my former paper into a leading journal of American dentistry,† an unexpected opportunity has been given of impressing upon dentists the heavy responsibilities, hitherto generally unacknowledged by them, that attach to the extraction of teeth from pregnant women; and I can not but hope that the views expressed may thus be made productive of decided and extensive good. —*Boston Medical and Surgical Journal.*

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* Edinburgh Medical Journal, November, 1859, p. 424.

† Dental Cosmos (new series of Dental News-Letter). Aug. 1359. p. 53.

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ERRATA.

In the June number of the Register, on page 396, 7th line from the bottom, instead of *as vigorously as possible*, read, *apply gentle pressure when the desired object can be obtained by it.*

On page 410, 5th line from the bottom, instead of, *lead in contact with living tissue preserves the tooth*, read, *lead in contact with the soft tissue, within a tooth, possesses medicinal virtues.*

Also, on page 414, 3d line from the bottom, for *nitro-muriatic*, read, *nitro-sulphuric.*

Editorial.

POPULAR INSTRUCTION.

The education of the people in regard to any profession, is one very efficient method of elevating that profession. This has been recognized by all the better members of the dental profession, as a very important matter. Let any person understand the true value of the teeth, the necessity for their preservation, and the means by which that can be the most effectually accomplished ; the difference between good and bad operations, and the means by which that may be determined, and dental quackery will soon be at an end ; inferior operations will not be tolerated, a high order of operations will be demanded, and they must be produced. Now what would be true in the case of one person, in this respect, would be true of an hundred, or of a whole community, under similar circumstances. Though the existence of this requirement is so fully acknowledged, yet the best method of meeting the want calls forth some diversity of opinion.

Some suppose they can enlighten their patients more rapidly and more perfectly by conversation than by any other method. Others think that by the judicious employment of well prepared essays among their patients, more can be done than by any other means, and with a great economy of time. The essay containing the proper and desirable information may be referred to by the patient time and again, until its teachings are all perfectly impressed upon the mind ; and when this is the case, they will be carried into practice by the person, just as circumstances may enable him to do it, while that which is simply narrated to the patient may soon be forgotten, and can not be referred to again. And again, too many patients will suspect that there are sinister motives behind the oral explanations and teachings, while nothing of the kind can arise in the mind while perusing a properly prepared essay. Various essays have been prepared for gratuitous distribution, most of them by practitioners for their own use ; some of them, we have observed, partake too much of the advertisement features, and so defeat the true aim of their publication. Some very good works of this kind have been published and put into the market, but the profession, as a general thing, do not seem disposed to take hold of them ; and probably for two or three reasons. In the first place, they cost something, and they have some doubts as to whether they are just the thing that will suit them.

Now, we propose to commence at once the publication of a series of articles in the Register, with the view of giving information upon dental science for the general reader. They will be short and comprehensive, each article discussing but one or two subjects.

The object will be that practitioners may have them copied into the papers or publications of their respective localities, and in that way brought to the notice of their patients and all the people in their respective communities. This can be done without any cost to the practitioner, except the subscription price of the Register.

Now, it is the business of the members of the profession, who feel the want of such articles, to prepare them and send them on to us for publication. We do not intend to prepare more than our quota of these articles, but we do expect the profession to be generous in the supply. Each one might suppose it would answer quite as well to publish his articles at once in his village paper, without publication in the Register at all ; but in that case, his article would not accomplish a tithe of the good it would do if published in two or three hundred papers through the country, and read by ten thousand persons for every hundred that would read it in the former case, and besides, each practitioner could avail himself of all the essays thus published in the Register. The articles when copied into any papers should always bear the name of the authors.

We propose to begin this series immediately, and we hope the members of the profession will prepare and forward to us as soon as possible. Each writer will, of course, choose his subject.

T.

"A PRACTICE TO BE CORRECTED."

The first article of the August number of the "*American Dental Review*" is headed as above. We agree mainly with the writer, but just now refer to a different practice. For instance, Dr. Leslie, of the Review, obstinately persists in writing our name "Watts," although he is aware that he once procured for us a slight castigation by so doing. So persistently obstinate is he, that when the "head lines" of the "*Review*" should read, "*Fang Filling.—Broch,*" he has them, "*Fang Filling.—Watts.*" Now, if he don't quit it, we'll——write a favorable "notice" of *Leslie's* Dental Depot. W.

* * *

A "CROWNER'S 'QUEST."

Our friend, M'Q, of the "Cosmos," has been playing coroner, and has held two inquests over the dead bodies of decayed teeth; and the verdict in each case, is, water in the pulp cavities, in spite of "white wax" administered as a prophylactic.

But lest he should consider this statement not sufficiently *dignified,* for a grave journal, like the "Register," we will be serious.—To demonstrate the correctness of his position, that the pulp cavity will be filled with serum, if not filled with gold, he plugged the cavities of decay, in some extracted teeth, with white wax, and immersed them in water. In several hours, and again, in two days, he and his friends found water in the pulp cavities. We would state that we have repeatedly tried similar experiments, with different results, but they would probably be regarded as *exceptions,* and claimed as proof against us. In a case reported in our September number, the reader will remember that a tooth, with the canal unfilled, remained perfectly healthy, more than eight years, and the canal was still dry. Our friend says of this, it "is one of those instances in which 'the *exception* proves the *rule*'." Of the origin of this phrase we are ignorant. It may contain some latent wisdom; but if it is applied here, according to its true meaning, a more soft and harmless piece of jargon could not well be penned; for, if one exception proves the rule, two afford still stronger proof, and the best established rule is the one that has all the facts arrayed against it. The case referred to flatly contradicts his theory; but he is true to his prototype, of Irish memory, who, when told that his theory was contradicted by *facts,* simply replied, "So much the worse for the facts, then."

In the case reported in our September number, the "confined air" was not "vitiated," nor "most offensive," nor has it been so in similar cases which we have examined. We removed a filling last week (on account of fracture of the tooth) which was inserted ten months ago, and found the canal *dry;* nor could we, or the patient, a sensitive lady, detect any odor, "offensive" or otherwise, emanating from it. But, perhaps this is another *exception,* and it will be claimed as a second witness against us.

But we fully believe that our friend and his jury found water in the pulp cavities. We covered the crown of a molar with wax, and, after due immersion, found water on its grinding surface. Did it first get into the pulp cavity, and pass out through the dentine and enamel? or did it pass between the wax and tooth?

But on the other hand, do those who fill the fangs generally pack the gold so tightly, the whole length of the canal, that there is no space left for the serum to occupy? We know it is sometimes done, for we have done it in favorable cases; but we have examined a goodly number of teeth, for the work in which this degree of perfection was claimed, and found plenty of room for *liquor sanguinis,* or any other liquor.

But our friend asks "in a spirit of inquiry, whether those who are opposed to filling fangs, have not neglected to mention two important objections that have had as much or more weight, in inducing them to assume this position, than anything else, viz: the difficult nature of the operation, and the inadequate compensation they have obtained when performing the task?"

Our answer to this (for ourself only) is an emphatic NO; for we rather like to encounter difficulties, and, if we work for nothing we are proud enough to do as well as we can.

And now, "we would ask in a spirit of inquiry," does our friend, who is so ready to inquire into the motives of others, *feel* that these considerations would be likely to lead him aside from the paths of professional rectitude? Would they tempt him to lay aside his self-respect, and to forget his manhood, and his duties to his fellow man? "We desire to be distinctly understood; these are are not advanced as assertions, but put forward as queries."

But what about filling pulp cavities with plaster of Paris, as we are considerately advised to do *if we don't know how, or can't afford to fill them with gold?* Of course the *liquor sanguinis* will not get into the canal through the *dentinal tubuli,* and the *lacunæ* and *canaliculi*, if it has plaster in it, or, if it does, it will not likely "spoil." Why not stop out the serum with sponge? It is, perhaps, more porous than plaster. But the question before us is not whether the canal will remain dry or not, but whether or not it should be filled with gold. We began, several years ago, to experiment on the subject, because we thought that fang filling was based on a doubtful theory. We worked our way gradually to our present position. We watched our cases three years before we mentioned the practice to any one, and we have now watched them three years longer, and are satisfied with our success.

And now, reader, this hobby may rest awhile. W.

FOUR SETS OF INCISORS.

Examined to-day a case in the mouth of Mr. A. A. S, of New York City. There has been in the case rather an unusual developement of teeth, especially so far as the superior incisors are concerned. At six years of age the deciduous incisors were shed as usual. The permanent teeth were erupted in the usual manner. At eleven years of age the superior incisors were so much decayed as to render their removal necessary, at the age of sixteen, a third set of firm, strong incisors were erupted, these remained till the age of thirty-nine years, when in consequence of decay, they had to be removed; they were very strong firmly attached teeth, requiring great force for their removal. A rubber job was made and put in about three weeks after the removal, they have now been worn two weeks, and at this time, there is a central incisor of the fourth set being erupted, the edge about one-eighth of an inch through the gum, it prevents the plate from taking hold upon the arch. The edge of the tooth, is that of a well defined central incisor, and in proper position.

It is strange that within six weeks of the removal of the third set of incisors, all firm and full grown roots, that one of the fourth set should appear. Its growth is very rapid. Will any one give the physiological explanation? T.

SUPERNUMERARY TEETH.

Why some persons have a greater number of teeth than the natural allotment was long considered a mystery ; but it is now cleared up by the *American Dental Review,* which suggests that it is owing to a redundancy of the phosphates, or at least that, in such cases, "there is evidently no lack of the phosphates." We did not suppose that a redundancy would increase the number of the organs ; but, if the doctrine be correct, we should be cautious in the use of these salts, lest, by an increased number of shin bones and their appendages, we become changed from bipeds to quadrupeds.

The editor inquires, in conclusion, if Dr. Watt would neutralize the redundancy in such cases. Certainly he would. If a man is too short, stretch him, and if too long, cut him off, is our motto.

W.

A CASE OF ALVEOLAR ABSCESS.

About the first of last December, I was called on to fill a tooth—an upper canine—which was affected with abscess, of several months' standing. I cleansed out the cavity of decay, and the canal, and passed a broach drill through the apex of the fang. Then, with a quill broach, armed with cotton, I pumped creosote up the canal, till I saw, by its cauterizing effects, that it had passed entirely through the fistulous opening. I filled the tooth immediately, leaving the canal unfilled.

I saw the tooth a few days ago. Every thing about it is, and has been satisfactory.

I suppose it would be impracticable, in most cases, to prepare the tooth so thoroughly at a single sitting. But patience and *mild* means will mostly succeed.

W.

SCIENTIFIC ARTISAN.

This weekly publication, issued by the American Patent Company, is one highly valuable to all inventors, tradesmen, artists, and mechanics of all kinds ; as all subjects pertaining to mechanics are freely and very thoroughly discussed in the full light of modern science ; every subject discussed in it bears evidence of a thorough acquaintance with scientific principles. It is a publication that no mechanic or artist should be without.

This Company affords unusual facilities to inventors for the procurement of patents. Address Scientific Artisan, or American Patent Company, Cincinnati, O.

T.

THE

DENTAL REGISTER OF THE WEST.

VOL. XIII.] DECEMBER, 1859. [No. 6.

Original Essays and Communications.

"DENTAL PERIODICAL LITERATURE."—"DENTAL JOURNALS."

"The best laid scheme o' mice an' men
Gang aft agley,"

And sometimes, in spite of the best attention and closest scrutiny of the machinist, a screw gets loose, and the whole machinery is deranged and torn to pieces. Indeed, the whole moral machinery of our race is sadly out of joint, and the physical is but little better. This, however, might be borne with some degree of patience, as we have become pretty well used to it, were it not that, as a consequence, our "periodical literature" falls short of what it ought to be. Sad and sudden is the news! but true it is that there is something wrong with our "dental journals"—with our "dental periodical literature." There must be; for two unimpeached witnesses, examined "separate and apart, and without the hearing of" each other, have, simultaneously, testified substantially to this fact.

The evidence of one of these witnesses is recorded in the editorial department of the "*Cosmos*," that of the other, in the "original" department of the "*American Journal.*" In the latter, it is intimated that our periodical literature was at one time pretty good, at least "from fair to middling," but that it has degenerated in quality, in proportion as it has increased in quantity. Still, according to this witness, it has lost but little of interest, whatever it may have lost in character; for he says, "No subject is more interesting to the observer of the progress of dentistry than the state of its literature, and more particularly, its periodical literature." Still he tells us, " It is difficult to say whether dentists should esteem it or not;" but before he gets through, the difficulty vanishes, and he tells us that it " can not be considered as reflecting credit upon dentists." We thought, at first reading, that these sentiments were slightly contradictory, but were reminded that even a cock-fight " is more interesting to the observer" *sometimes*, than any other "subject;" yet it should not be esteemed, and " can not be considered as reflecting credit upon" those who bring it about.

The other witness seems to intimate that dental journals have always been highly defective, and that a retrospective view of them would call for mortifying acknowledgments and admissions, on account of the " unpardonable laxity " manifested in regard to the admission of " effusions of ignorance, the ebullitions of passion," " the cant phrases of the vulgar," and other " sad trash." They do not agree as to the result of a " retrospective view." One finds in the journals of bygone periods a waste of " *time*, *talents* and *energies* " in " the development of personalities," and, even yet worse, the employment of " expressions that are usually left to the vulgar and illiterate, and which, when found in the pages of a professedly scientific magazine, *excites* in the mind of the gentleman, and devotee of science, a feeling of loathing and disgust." (We would clip the tail of that last verb if it was ours; for, in the expressive language of its proprietor, it " sets all the rules of grammar at defiance.") The other finds the present view bad, but in the retrospective one quite satisfactory, and endeavors to have the present transformed into the same image. Accordingly, he appeals to the men of education and dignity to stand forward, and *renew* their efforts with the same zeal which actuated them in the beginning. He regards the present "profession" as a band of "sutlers," as "hawkers and criers," and charges the true profession, "with the exception of two or three of the greatest names," (himself and us, of course,) with the cowardly crime of retiring before them. He can't excuse these retired "veterans" on account of age; for, he maintains that "fifteen or twenty years has surely not made old and unqualified men of those who were then youthful." And if they "has" not, his doctrine, and a correct one, is that they must go to work again, or "the contempt of the future awaits them." But as these men were "youthful" when they wrote so gloriously for our periodicals, we hope the *youthful* of the present day will take courage from, and emulate their example, in all save their inglorious retirement; for we believe that the youthful men of to-day are at least as talented as the youthful men of any former period.

But the reader must not despond. The condition of our periodical literature is not hopeless; for we are told that, "out of the four or five thousand dentists in this country, a sufficient number might be found to furnish one or two periodicals with the proper material." And we are still more encouraged when we are told that these efficient individuals "have lately been found." Now, if "the able-minded deserters should again be brought into the ranks to serve out their term of enlistment," we will have a "revival of letters" in our periodical literature. It is consoling, too, to learn that we are not worse than, if even as bad as our neighbors. The British Journals are condemned as imperfect too; but we are told that they "should not be judged harshly," as they "are yet *in embryo*." This is certainly considerate; but we would suggest greater mildness still. Unborn babes should not be judged at all, especially when "yet *in embryo*." Why, then, should *embryonic* periodicals be held accountable? In the name of "unborn millions," we protest against such injustice. The English journals, however, are advised to use "the knife;"

and the writer adds, "In England, Americans are noted for using knives, therefore, our present advice will not suggest thoughts of a Franco-American alliance." But does it not rather suggest a resort to the Cesarean operation, at too early a period of utero-gestation, as the periodicals are still "*in embryo*." But this can hardly be the intention of the writer; for he tells us that he means "more properly the pruning shears, as we look at them from a gardener's point of view. They are the semi-respectable fruits of our toil." We don't know the meaning of this sentence; but if the writer intends to say that pruning shears are only *semi-respectable*, we differ with him.

But we believe the two articles under consideration, the one in the October number of the "*Cosmos*," and the other in the "*American Journal*" of the same date, will do great good. The one urges the "deserters" to renew their work, because the present force is insufficient; the other as strongly urges the present force to work better than their predecessors, and we heartily sympathize with both. This sympathy, however, will not induce us to join them in singing their Jeremiads over the follies and failings of our dental periodicals; for though they are far from perfect, yet we are not ashamed of them. They will compare very favorably with the periodicals of any other profession; and there has been no period of their existence that they would not.

The writer in the "*Cosmos*" gives his "*senior*" some very good advice as to the management of his department of the journal, which was, we think, unnecessary, yet it was highly consistent that he should give it; for a man, during the first year of his editorial labors, is wiser (Proverbs, xxvi, 16) than at any subsequent period. This must not be disputed; for we speak "*by experience*."

But lest our friend should be too disconsolate on account of the admission into the journals, of papers "faulty in language," "defective in structure," containing "inelegant language," and not "well written," in short, lest he should pine too sadly for essays as painfully accurate as the school-girl compositions of Miss Araminta Snooks, we would suggest, as a balm to his troubled breast, a few remarks from a criticism in the "*Atlantic Monthly.*"

In speaking of the effect of our public schools and the universal reading of newspapers, this critic says, "This has tended to make the common language of talk more bookish, and has thus reacted unfavorably on our literature, giving it sometimes the air of being composed in a dead tongue, rather than written from a living one." And again,

"A dialect that is taught grows more and more pedantic, and becomes at last as unfit a vehicle for living thought as monkish Latin. This is the danger which our literature has to guard against from the universal schoolmaster, who wars upon home-bred phrases, and enslaves the mind and memory of his victims, as far as may be, to the best models of English composition,—that is to say, to the writers whose style is faultlessly correct, but has no blood in it."

For our own part, we prefer a "blooded" style to "a potted literature;" and we believe that our taste is not singular.

W.

PROFESSIONAL HEALTH.

The best definition of health will probably be found in "*Harmony of Function.*" To establish anything like a healthy state of the Dental profession, it will be necessary to overhaul the entire old hull; and that task must not be consigned to any other than *competent* hands, if we wish it to *improve* in health; any more than we would call upon a divine to examine and adjust the marred and displaced limbs of the poor victim of some "horrid railroad accident," instead of the cool and well qualified *practical* surgeon.

That this may be well done, it will be necessary to remodel the nomenclature of the profession by such severe pruning, that many of the old fogies will raise their skeleton-like hands over their bald and narrow foreheads in holy horror for the (to them) desecration. A nomenclature, to be useful, must needs be definite; and to be definite and have significance, it must be kept alive by use. To be freely used between the members of the profession, it is of the first importance to be well studied, clearly comprehended, and faithfully improved and recorded.

That it may be recorded, a dictionary of terms must be made, including, of course, many terms not originally, nevertheless strictly dental in their significance, at least in this relation. For all terms that pertain properly to the basal sciences, the culminations of which manifest themselves in dental formulary or modes or means, may be freely and without well-founded objection, pressed into service, with the modifications necessary to make them what it is most desired they should be, clear expositions of the specialities hereunto belonging.

That this may be done in any adequate degree acceptably to those who need it most, it will be necessary to have more than one hand at the work. I would here suggest the propriety of laying the subject before the highest and most harmonious of dental associations, so that their combined intelligence could be called into exercise in selecting and appointing competent men to the various departments, and let them when so appointed, comprise a board of control, before whom the entire work should pass before publication. If this be done, the just complaint of the low state of our profession in a literary point of view, will no longer have a foundation upon which to raise its hateful front.

It may be objected that this is not necessary, in view of the many medical, mechanical, surgical and scientific dictionaries already in the field; to which it is only necessary to appeal for refutation, to the experience of any who have sought out the significations of many terms in use among us; so loosely bandied about that we become doubtful how to define; and after the most thorough search, to our dissatisfaction found so many mutations of signification that *might* be meant, that we were utterly at a loss to decide whether the author or speaker meant this, that or the other.

If no other reason existed for a Dictionary of our *own*, the eminently progressive and developmental character of the speciality would *alone demand* such work.

Dentistry, as a science, sends its roots far into the three kingdoms, from which to draw materials of which to build its beautiful body. And that the suctorial mouths may not be mistaken for those belonging to another department of nature, their specific character must be closely studied and clearly comprehended, which can not be done without the aid of glass and retort—microscope to lay open the minute structures—and alembics to determine proportions. Then with these discoveries for corner-stones, we must institute long, patient and voluminous observations, the work of the many; after which comparisons, make our deductions so as to constitute them demonstrations, thus supplying principles upon which, or in agreement with which we may apply means and modes, constituting the detail of a reliable, satisfactory and eminently successful practice of this culmination of all the merely earthly sciences.

If every step be carefully and well taken, each organ properly conceived and fully developed, all we need is to have each one in normal action to constitute perfect *health* in the professional body.

"Create a soul, and it will aggregate to itself a body suited to its uses," is an aphorism that lies at the very foundation of all physical science. And if the combined efforts of some of the honest, earnest workers in the profession can only be secured, I think SEED may be so fitted by the fulfillment of conditions, as to imprison the form, type, or germinal and developmental power so perfectly as to make it only necessary to bring it into favorable relations, to produce such a well-preportioned and fully grown profession, that it shall be the admiration of every honest beholder; and prove to the world that what is generally called the only legitimate way to generate and develop the professional callings, is no more true than that all the bright children on earth have been begotten and born in legal wedlock. Not to say that the converse is true, which would only enunciate that other anachronism, and say that what is right and proper in municipal relation, can only be proper anywhere in the domain of nature. Nature's laws precede and should underlie all merely municipal regulations—I will not dignify them by saying laws—so long as they are the mere enactments of men, and that not of the best sort.

A certain shrewd and recondite poet said of himself (I will not say whether physically or scholastically),

"I am the sickly offspring of no foul embrace,
But stamped in nature's mint of ecstasy;
I live not to boast, but build a generous race."

And now let each real worker in Dentistry take his cue from this saying, and prove his true legitimacy to the profession of his choice, and do what he can, if not to boast an illustrious line of worthies in this field of usefulness, at least do till death "to build" by his best efforts, a noble and generous platform, upon which a really dignified, because preëminently useful, profession may securely and forever stand. N.

THE D. M. C's. REPLY TO "ONE OF HER BOYS."

You wish to know all about the D. M. C., do you? Well, knowledge is power, and you wish to be powerful! You felt bad, did you, to see your Alma Mater humbled by one of her officers asking aid to reach Niagara by a contribution? You must have a large quantity of the milk of human kindness, to feel bad under such circumstances, so come, let me milk you a little. But in the first place, I refer you to No. 4, Dental Reporter, published by J. T. Toland, Cincinnati, O.

You confess your ignorance, eh? Then there is hope for you yet, as confession is good for the soul. No wonder you are ignorant, for you don't take the *papers;* now that is very wrong, for there is nothing like printer's ink, before breakfast and after supper—or you never would have made such an *ass* of yourself. Balaam's ass had sense and long ears, but you had the long ears, without the sense. If you are too poor to take the *papers*, I will send you either the Scientific Artisan, Scientific American, Dental Register, New York Sun, Ledger, Cincinnati Commercial, Actor, or London Times, for either one or the other have articles from the pen of your despised *baggage man.* Your slur about the aid to reach Niagara by a contribution was unprofessional and uncalled for; it was contemptible and mean, to say the least. When you ask and receive your fee for filling teeth with amalgam, do you note that down as aid, given you by contribution? not you!

I was seeking after knowledge under difficulties. Was it any disgrace in me to work for the money before I paid my expenses? was it any disgrace in me to listen all day to the talk of the *wise men*, in the Convention, and then, like Ben Franklin, the poor printer, walk the streets and eat my penny loaf? was it any disgrace to that nation, who called Cincinnatus from his plow to rule over them? Bloomfield and Burns were plowmen, Arkwright was a blacksmith, Henry Kirk White was a butcher-boy, yet all were bright, particular stars; but you (with your *hot-house, forced culture,*) will never emit a spark of sufficient brightness to see your own folly, but forever remain, what you call yourself, "one of the boys." Therein lies *your* humility.

You would like to know who I am, would you?
Curiosity in a woman is a curse,
But in a man, it's ten times worse.

I am what I am; yet I will tell you somewhat of my past life (as you did not take the papers), and mark the contrasts.

I have dined in the palace of kings and queens (at Brighton Palace, England), and supped in the hut of the Indian (Texas);

I have listened to the greatest orators of their time (Lords Palmerston and Russell, Clay and Calhoun, Lamartine and Everett), and heard the vilest language ever uttered by the vilest of women (in a watch-house in New York); I have tossed upon the mighty waves of the ocean, and laid me down on the smooth prairies of New Mexico; I have soared high up into the heavens (in a balloon), and descended down into the bowels of the earth, in lead mines; I have hired servants to wait upon me, and have hired myself out to wait upon others.

I have dabbled among the Bears and Bulls, and been a "lame duck." I have seen men shot, hung, stabbed, drowned, poisoned, and blown to pieces by gas and gunpowder, yet I ran away from flying bullets; you may say that was cowardly, but I say it was wise,

> "For he that fights and runs away,
> Will live to fight another day."

I have poured two thousand bright gold dollars into my wife's lap, and now I am not worth one; yet I am rich, in fact, very wealthy, for I have one of the best of wives, and four sweet *cherry bibs*, which are worth more than all the wealth of the world to me.

You inquire what the D. M. C. means? The title was conferred upon me by those who had the power invested in them to create it. Some say it means Demonstrator of Manual Combustion, because I "fire up" before going to hear lectures; some say it means Demonstrator of Mechanical Caloric, because I was seen inside of Captain Ericson's engine, trying to discover the water supply pipe; Prof. C.; of our college, says it means Decent Man's Companion; but no doubt you think it means D——n Mean Cus. If you do, it is merely the echo from your own hollow heart.

You whine and say you felt bad. I hope you feel better now; but you may snivel and turn up your nose still higher than it naturally was, when *swaged from the male and female dies*, for you are vain enough to think it makes you look *pug-*

nacious, without your being so. Your Alma Mater was humbled, was it, because a supposed baggage man occupied one of her honorable chairs? Be easy, my boy, for that same man sat in the same identical chair that King John did when he signed the celebrated Magna Charta at Runnymede—so honor the breeches.

Having an eye to business, I would inform you that after the College closes in the spring, I mean to outdo Blondin, by going over the Falls of Niagara in a skiff, having a parachute fastened to my body, to sustain me in the air, while the skiff is dashed to atoms in the boiling waters under my feet. Price 25 cents admission to Goat Island. If you have courage enough, come along, for there's room for one more. If we survive, you shall share half of the glory; but if we perish, there will be an end of "one of the boys," as well as of the despised "baggage man."

ALBANY PACKHAM, D. M. C.

INTRODUCTORY ADDRESS,

Delivered before the Class of the Ohio College of Dental Surgery.

BY C. B. CHAPMAN.

GENTLEMEN:—Having appropriated a portion of my time which was not devoted to other employments, searching for incidents connected with the early history of American colleges, partly, in the first instance, in order to contribute to my own pleasure, but later with the view of collecting those fragments into such form as to admit of preservation for future use. I take the liberty to present a portion of these memoranda to you as a not unappropriate subject for an introductory lecture in an institution which is mostly devoted to science. The introductory to my last course of lectures in this college was devoted to the incidents connected with the foundation of Harvard and Yale colleges. This will embrace the incidents, briefly presented, connected with the establishment of a considerable number of the institutions of our country. In the history of these institutions we find much that gives a view of the impulses that actuated our fathers in giving cast to the social and intellectual character of our country. The care bestowed in the foundation of these institutions grew out of the respect for religious principles which pervaded these communities. They were impressed with the fact, that in order to a just appreciation of general education by the people, it was necessary that their clergy, and others who were employed in the various professions and positions of trust, must themselves be educated, in science, art and literature, in order that the people might, in some measure, reap the blessings which these might confer. Each of the American colonies, although founded from different motives of speculative or social policy, was impressed with the value of education, as would appear from their early care in the foundation of institutions of learning.

The College of William and Mary, at Williamsburg, Virginia; was, next to Harvard, the oldest college in the United States. It was chartered in 1692, during the reign of William and Mary, and there were donated to it 20,000 acres of land. Harvard had been founded 34 years before, or in 1658.

In the early settlement of the colony of Virginia, an effort was made to establish an institution of learning. In 1619, the treasurer of the Virginia company received five hundred pounds from an unknown hand, to be applied by the company to the purposes of education of Indian youths in the English language and in the Christian religion. Other sums were at different times contributed, and five thousand pounds was in various ways pledged for the endowment of a college. The plan met with the approbation of the king, who recommended to the bishops to have a collection made in each diocese, and by carrying out this plan, fifteen hundred pounds were added to the fund. The college on its establishment was designed for Indian as well as for English youths. The Virginia company appropriated ten thousand acres of land at Henrico, on

James River, a little below the present site of the city of Richmond.

They entered upon the plan of placing one hundred tenants upon the land, who were to receive half of the produce, while the other half was to be applied to the support of the college. It is estimated that the profits would be five pounds to each tenant, or five hundred pounds for the whole number.

A person by the name of Copeland came out from England, who was to act as president of the college as soon as it was organized. George Thorp was appointed agent, and his first care was to arrange with tenants for the occupancy of the lands. He had hardly commenced operations, when he was slain, together with nearly all his tenants, by the Indians, in the great massacre of 1622.

An attempt to pursue the foundation of this college in 1660, was frustrated by the Royal Governor, Sir William Berkley, who, in answer to questions put by lords of plantations, "thanked God that there are no free schools, or printing, in the colonies, and hopes there will not be these hundred years." Express allusion was made in an act of the assembly in 1660, to the necessity of a supply of the ministry and the promotion of piety, and to the lack of able and faithful clergy in the colony. A charter was obtained from the government in England in 1692, through the agency of Rev. James Blair, who was encouraged and aided by the Lieutenant Governor of the colony. The institution took its name from the royal grantors, who appropriated funds, lands, and a revenue duty on tobacco for its support. Buildings were soon erected, and Mr. Blair became its President. The first building erected at Williamsburg was destroyed by fire in 1705. By the bounty of Queen Anne, and the assistance of the House of Burgesses, united by the exertions of Governor Spotswood, this building was soon restored. In the square in front of this building still stands, in a mutilated condition, though with evidence of its former elegance, a statue of Lord Betetourt, ordered by the colonial government in 1771, in gratitude for his just administration of the government. In 1718, a thousand pounds were granted to the college for the support of ingenious scholars.

Robert Boyle, the philosopher, who died in 1691, left his whole estate, after his debts and legacies should be disposed of by his executors, to such pious purposes as in their discretion they should think fit; but recommended that it should be expended for the advancement of the Christian religion.

Of this income, ninety pounds was appropriated to New England, one-half for the support of two missionaries among the Indians, and the other to be given "to the president and fellows of Harvard College, as the salary of two ministers to teach the said natives, in or near the said college, the Christian religion." The remainder of the income was given to the College of William and Mary, on condition of their supporting one Indian scholar for every fourteen pounds received. A house was erected for this purpose on the grounds at Williamsburg, as a school for Indian boys, and the residence of their masters, which still bears upon it the date of 1723. "The experience with the Indians in the south does not appear to have varied much from that of Elliot and his friends in the north. Indians were, however, taught here as late as 1774. Hugh Jones, then chaplain of the Assembly, who was also mathematical professor in the college, in a volume entitled "The Present State of Virginia," says of this attempt:—"The young Indians were formerly boarded and lodged in the town, where abundance of them used to die, either through sickness, change of provisions and way of life; or, as some will have it, often from want of proper necessaries and due care taken of them." Many of these, after being educated, returned to savage customs and heathen rites. A few lived as servants among the English, or loitered away their time in lounging and mischief. He adds, "But 't is a great pity that more care is not taken of them after they are dismissed from school; for they have admirable capacities when their tempers are perfectly understood."

In the early history of our country, the instruction of Indian youth was a romance of educational effort, and had many and free contributors.

The first organization of the college was under a body of visitors, a president and six professors. The corporation was entitled, "The President and Professors of William and Mary's College." The college had a representative in the general assembly. The professorships were as follows: two Divinity; one Greek and Latin; one Mathematics; one Moral Philosophy; and one Boyle's Indian Professorship.

The old colonial administration lent its picturesque dignity to the college.

As a quit rent for the land granted by the crown, two copies of Latin verses were every year presented to the Royal Governor. This was sometimes done with great ceremony, the students and professors marching in procession to the palace, and formally delivering the lines.

At the revolution, the endowment of the college underwent great changes. The war put an end to the colonial revenue taxes for the college support, and funds which had been pledged in England were not received. After the revolution, the loss of the old church and state feeling led to the abolishment of the divinity professorships, and others substituted in their places.

On the breaking out of the revolution, one half of the students, among whom was James Monroe, entered the army. After the surrender of Cornwallis, the French troops occupied the college building, and while they had possession, the president's house was burned,—but the French government promptly paid for its rebuilding. The college building was occupied as a hospital, at the same time, and was much damaged and broken up: but the United States Government has never made any remuneration therefor.

The college charter bears date of 1692, and Rev. James Blair was appointed President in the charter itself. He continued in this office till his death, in 1743, a period of fifty years. In 1689, he was appointed commissary for the colony of Virginia, by the Bishop of London, which office he also held till his death. By virtue of this office he had a seat in the Council of State, and received one hundred pounds per annum, as councillor. President Blair was a man of great perseverance and energy. He had to contend with discouragements and difficulties throughout his whole course. He was often opposed and thwarted in his plans by the royal governors, by the council, and, at times, even by the clergy, who were many of them men of questionable character, and the very refuse of the church in England. At one time, a large majority were arrayed against him. They accused him of exercising his office in a stern and haughty manner, but with nothing more. He must have been a man of great purity of character, for in all his contests, his adversaries never reproached him with any immorality.

His remains were deposited in the churchyard at Jamestown, and an inscription, alluding to his life and services, was engraved on his tombstone. But the stone has been broken, and the inscription has been so damaged that it can not be decyphered;—a fit emblem of the transient character of such inscriptions, in comparison with those which exist in the living character of the good citizen.

He left the whole of his library, which consisted mostly of works on divinity, to the colleges. These, with his own notes and manuscripts, remained in the library until the early part of the present year.

While employed in arranging materials, out of which the facts set forth in this discourse have been gleaned, the following appeared in a daily paper: "William and Mary's College, at Petersburgh, Virginia, was destroyed by fire on the morning of the 8th instant, (March.) The library and laboratory perished with the building. This was one of the oldest colleges in the country."

There is something peculiarly sad in the destruction of a valuable library, especially one which belongs to an old institution of learning. It seems reasonable that every thing which human foresight can suggest, should be practiced in order to secure such against the casualties of fire.

Among the graduates of this institution, four have been Presidents of the United States. These were Jefferson, Madison, Monroe and Tyler; also, Chief Justice Marshall and Gen. Scott.

The College of New Jersey, which is generally known as Princeton College, seems to have succeeded to the decline of the school which was established by Rev. Mr. Tennant, at Neshaming, and known as "The Log College." At this institution, several eminent persons were educated.

A charter was obtained in 1746, and the college was opened at Elizabethtown with Rev. Jonathan Dickinson as first President; but he died in 1747, within a year of its organization.

A new charter was obtained in 1748, and Rev. Aaron Burr, who was father of the politician and statesman, as President. The college was then opened at Newark, during the life of President Burr, but was removed to Princeton in 1757, immediately after his death. President Burr was succeeded by Jonathan Edwards, who was his son-in-law, but he died before he had fully entered upon the duties of his office. The college, which was first erected here, was called Belcher Hall, on account of valuable aid which had been furnished for its erection by Governor Belcher, but he chose to relinquish his claim to that of Nassau Hall, in honor of the great Protestant hero under William III.

Rev. Samuel Davies, succeeded him in 1758. He was a friend of Tennant, with whom he had visited England, and profited by his exemplary life and rich scholarship. President Davies was a finished scholar and ardent missionary; but the college was deprived of his services, by his death, within two years from the time of his appointment. He left some early discourses which made him a valuable name. Among them was one entitled, "Religion and Patriotism the Constituents of a good Soldier," which was suggested by the defeat of Braddock, in which was portrayed with prophetic force, the character and heroism of Col. George Washington; of whom he says, "I cannot but hope that providence has hitherto preserved in so signal a manner for some important service to his country."

Rev. Samuel Finley succeeded President Davies, but died in Philadelphia, in 1766, and his remains were borne to the grave by eight members of the senior class, in accordance with his own request.

Dr. Witherspoon was inaugurated in 1768, and immediately enlarged the field of study in the college by promoting the study of Mathematics and Mental Philosophy. During the Revolution, President Witherspoon was transferred to Congress.

Immediately after the battle at Princeton, in 1777, the college became the scene of conflict between the British occupants and a portion of the army of Washington. In the chapel, in Nassau Hall, hung a portrait of George II, which was destroyed by an American cannon-shot passing through the canvas. In the same frame now hangs a portrait of Washington, which was purchased with fifty guineas, which he gave to the college. This portrait was painted by Peele. The British army plundered and destroyed the library, some of the books having been found in North Carolina, where they were left by the troops of Cornwallis.

There is a picture of the college as it stood at the opening days of the revolution, by John Adams, in his diary, under date of August 26th, 1774, while the young lawyer was on his way to the Continental Congress.

He says, "the college is conveniently constructed; instead of entries across the building, the entries are from end to end, and the chambers are on each side of the entries. There are such entries, one above another, in every story. Each chamber has three windows; two studies with one window to each, and one window between the studies, to enlighten the chamber. Mr. Easton, the Professor of Mathematics and Natural Philosophy, showed us the library. It is not large, but has some good books. He then led us into the apparatus room. Here was a most beautiful machine, an Orrery or Planatarium, constructed by Mr. Rittenhouse, of Philadelphia. By this time the bell rung for prayers, and we went into the chapel. The President soon came in, and we attended. The scholars sing as badly as the Presbyterians in New York.

"After prayers the President attended us to the balcony, where we have a prospect of a horizon of about eighty miles in diameter."

Dr. Samuel Stanhope Smith, who was a son-in-law of Dr. Witherspoon, became President of the College after the death of Dr. Witherspoon, in 1794, which office he held till, from the infirmities of age, he resigned it in 1812. Dr. Alexander has given an account of the impression which President Smith made on his cotemporaries. Describing his appearance in 1801, at Princeton, he says, " certainly, viewing him as in his meridian, I have never seen his equal in elegance of person or manners. Dignity and winning grace were remarkably united in his expressive countenance. His large blue eyes had a penetration which commanded the respect of all beholders. Notwithstanding the want of health, his cheek had a bright rosy tint, and his smile lighted up the whole face. The tones of his elocution had a thrilling peculiarity, and this was more remarkable in his preaching, when it is well known that he imitated the elaborate polish and satirical glow of the French School."

Dr. John Mclane filled the chair of Chemistry and Natural History, of Mathematics and Natural Philosophy, from 1795 to 1812. He was a native of Scotland, was well versed in mathematical sciences, and occupied a high position before he came to this country, having combated with Priestly, the great champion of Phlogiston.

Notes have been found which indicate that he was the first who taught the true nature of flame.

The present President of Princeton College is his son; also, Professor George M. Mclane, the author of a valuable work, which has recently been published, entitled, Elements of Somatology.

The principal early benefactors of this college, were Col. Henry Rutgers, of New York, and Mr. Elias Boudinot, who founded a cabinet of Natural History, and bequeathed eight thousand dollars and four acres of ground. Dr. David Hosack, who was one of its alumni, gave a valuable cabinet of minerals.

In the Philosophical Hall are preserved the electrical machine of Franklin, and the Orrery of Rittenhouse, before referred to.

From information found in the early records of Trinity Church, in New York, it may be inferred that as early as 1707, it was the intention of the colonial government, then represented by Lord Cornbury, to provide a site for a college upon the Island of New York. The subject seems also to have attracted the attention of Bishop Berkley, after a plan he had formed for the establishment of an institution in Bermuda had failed. In 1746, funds were raised by a lottery which was authorized by the colonial government. The income from this source amounted to three thousand four hundred pounds, which was placed in the hands of trustees, a majority of whom were members of the Church of England, and in those of the vestry of Trinity Church. Opposition to the Church of England, seems to have thwarted their plans for a time.

A charter for King's College was however granted, bearing date of 31st October, 1754, and Dr. Samuel Johnson was invited to take charge of the institution.

Dr. Johnson had accompanied President Cutler to England for ordination, and he returned to Stratford in the capacity of a missionary of the society for the propagation of the gospel. He would seem to have been conspicuous in the world of letters, for the University of Oxford had conferred upon him the degree of D. D. Dr. Franklin had so highly appreciated his ability and fitness to take charge of an institution, as to be anxious that he should take charge of the University of Pennsylvania. Bishop Berkley who retained an interest in the college, urged that the first care should be to give instruction in the Greek and Latin Classics, both of which he urged should be well taught, as an incentive to good life and morals.

The college was organized in May, 1755, when Trinity Church conveyed to its Governors the land enclosed by Church, Barclay and Murray streets, and the Hudson River. The only condition they made was that the President should always be a member of the Church of England, and that its liturgy should be used in the services of the college. James Joy went over to England associated with Dr. Smith, provost of the college of Philadelphia, and they returned with liberal donations.

The first commencement was held in 1758. The original building, which is the central portion of the present edifice, was completed in 1760. The President, contemplating retirement on account of advanced age, made application to Bishop Lecher, in England, for an associate who might succeed him in office.

The person chosen for this purpose was Miles Cooper, a young graduate of Oxford. Mr. Cooper was but 27 years of age, and, unlike his predecessor, possessed a convivial turn. But the most notable incident in his career, was his espousal of the tory side in the revolutionary contest. Mr. Cooper became so obnoxious to the people, as one of the tory plotters, that in April, 1775, he and his friends received a significant hint from a published letter, which was signed "three millions," to fly for their lives or anticipate their doom by being their own executioners.

"On the night of May 10th of that year, after Hamilton and his young companions had destroyed the guns on the battery, and one of their comrades had fallen, the mob became greatly incensed, and proceeded to expel Dr. Cooper from the college."

Although Hamilton was active in the cause of liberty, he devised plans which admitted the escape of Mr. Cooper from the college in the night time, when he wandered, half dressed, about the shore of the Hudson, till near morning, when he found shelter in the old Stuyvesant mansion in the Bowery, where he passed the day, and at night was taken on board an English ship of war. He kept the anniversary of these events the next year, by writing a poem descriptive of the circumstances, which may be found in the Gentleman's Magazine for July, 1776.

This is said to be a fair specimen of his poetic powers.

Upon the flight of Dr. Cooper, in 1775, Rev. Benj. Moore was appointed President *pro tem.*, but the exercises of the college were soon after entirely interrupted by the revolution. The building was taken possession of as an hospital, and the library, which contained many valuable works from the University of Oxford and from other sources, was removed and nearly destroyed.

There were no graduates from 1776 to 1784.

On the restoration of peace an iron crown which surmounted the cupola was removed, and, by an act in 1784, the name was changed from King's to Columbia College.

The first student who presented himself, after the revolution, was De Witt Clinton; one of the last who left it before the revolution, was Alexander Hamilton. John Randolph appears among the early students after the restoration.

The next President was William Samuel Johnson, son of the first incumbent. President Johnson was a member of Congress in 1787, while it sat in New York, but when it was removed to Philadelphia, he resigned his place and devoted himself entirely to the interests of the college. He retired in the year 1800, on account of the infirmities of age, and returned to Stratford, where he died at the age of 92. Since the commencement of the present century, there has been no marked incident in the history of this college. Its teachers have uniformly been of the highest order, and the institution has been remarkable in sustaining the classic cast which was imparted by its founders from the staid universities of old England.

The property of this college is more valuable than that of any other institution in the country. It owns valuable real estate, though it has not, hitherto, greatly profited by it. It consists of real estate in the 3d ward, in New York, now estimated at more than half a million; and of property in the 19th ward, once occupied as a Botanic Garden, which was granted by the legislature in 1814. This, which is in Fifth Avenue, consists of two acres, and is valued at about four hundred thousand dollars. The income of the college, in addition to these, consists of rents amounting to nineteen thousand dollars, from other property situated in the 3d ward.

Brown University is a monument of the energy and faithful adherence to their church, of the Baptist denomination. It originated when the State of Rhode Island was a British Colony, and was founded through the exertions of Mr. James Manning, a Baptist clergyman, who had been educated at Princeton. At first it bore the name of "the College of Rhode Island," but the privilege was conferred in its charter to change the name to that of the most distinguished benefactor, at a subsequent time. The name was changed to

Brown University, in honor of Hon. Nicholas Brown, who greatly assisted the institution by liberal grants as late as some time in the year 1804.

This institution suffered some of the vicissitudes of war, as may be inferred from the fact that its building was made to serve the purpose of a Military Hospital by the French troops, under Rochambeau, about the year 1777. The exercises of the college were so greatly interrupted, that no catalogue was issued between 1777 and 1784.

Among the distinguished presiding officers and instructors, in this institution, none have deserved more honor than the present incumbent, Rev. Francis Wayland, D. D. President Wayland is a native of the City of New York, where he was born in 1796. He was educated at Union College, and studied Theology at Andover Seminary, and was inaugurated as President of Brown University, in 1827. He adopted the plan of teaching his departments, which were *Moral Science*, *Intellectual Philosophy* and *Political Economy*, by means of lectures instead of the use of text books, which led to the arrangement and publication of his valuable works in these departments.

The history of the foundation of institutions of learning in a country, ought to be regarded among its most notable events. The times are faithfully recorded in the history of different periods when human liberty, and the rights to enjoy the produce of individual labor, was quite different, even in the more enlightened countries of the world, than at this time. The time was when kings, princes, and prelates, did not possess the measure of education which may now be enjoyed by every person in whatever condition in life. If the source of this change is not to be found in the diffusion of knowledge, such improvements will be found to correspond in time, date and locality, to the establishment of educational institutions, and the increase of means for the general diffusion of knowledge.

A high standard of education among the few is always accompanied by an unstable government of a country; but the general diffusion of knowledge, or the education of all, tends to the establishment of such forms of government as will give equal liberty to all classes. The power which knowledge confers, diffuses itself into all the departments and pursuits of life. It prepares the man to act well his part in the various employments in which he may engage.

The philosopher's stone, or universal panacea, will no longer be sought by men of science, nor will they waste their time or energies in useless pursuits.

The rulers of a country will waste the energies and treasure of their subjects to little purpose, unless they mature well their plans of government.

The commander of an army will sacrifice his men with but futile results, unless he matures well his plan for a campaign. The value of the strength and valor expended by his men will correspond with the wisdom of the plans which direct their movements.

This is but a representation of the value of time and strength, whether physical or mental, as we observe their results in the various walks of life. Knowledge confers power—power to the statesman, to the civil and military ruler, as well as to the man of science and the artizan.

The knowledge conferred by the labors of a Humboldt, and Miller, are available to all who are engaged in the various departments of science and industry, and such, forms the most useful capital when well applied.

It is our province to unfold by a limited range of the various departments of science; but we are assured that the diligent student will not remain satisfied without the complete attainment of all that pertains to his own pursuits. You have assembled in this college for the purpose of preparing yourselves for the practice of a useful profession; and will you allow me to urge you so to employ these months which you may remain in this place, that it may not justly be said of any that you are not better prepared to engage on your chosen profession, than those on whom these advantages have not been conferred.

HUNTER ON SLAYTON.

MESSRS EDITORS :—I resume my pencil (I abhor ink, "the black and midnight hag," it stains my fingers,) in answer to Dr. Slayton's proposition in the November No. of the Register. It was Job, I believe, who exclaimed, "Oh that mine adversary had written a book." Slayton has written enough to fill a small sized primer, principally devoted to a certain improvement (?) professional ethics, how to obtain a patent surreptitiously, and the game of brag; after reading which, I can fully understand Job's philosophy. In his last instalment, he commences with finding fault with my language, thereby hoping to gain sympathy for his cause. I have only to say, that I am disposed to call things by their right names, and don't believe in mistifying truth in clouded language, when good old Saxon is clear and to the point. Hence, when a man deliberately writes that concerning myself which is untrue, and I know that he is aware of it, I pronounce it a lie, as there is no other word for it without circumlocution; and I do not know by what code of ethics I should be debarred from telling the truth.

In the July No., I stated that Slayton had applied for a patent, and that when issued it would be worth "just precisely its bulk in blank paper;" and now we have his own testimony to that effect; for, to quote his own words in his last, he says: — "In my specifications I simply state that I use gold or silver *properly* prepared, leaving just enough untold to defeat just such efforts as you are now making." Be it so; then his process is not a *patented* one, but a *secret*; and he has, in direct violation of the law, and premeditatedly, as the above quotation shows, surreptitiously obtained a patent. Here is the law:

"But before any inventor shall receive a patent for any such new invention or discovery, he shall deliver a written description of his invention or discovery, and of the manner and process of making, constructing, using and compounding the same, in such full, clear, and exact terms, avoiding unnecessary prolixity, as to enable any person skilled in the art or science to which it appertains, or with which it is most nearly connected, to make, construct, compound and use the same."

"*And be it further enacted*, That, whenever any patent, which has heretofore been granted, or which shall hereafter be granted, shall be inoperative or invalid, by reason of a defective or insufficient description or specification, or by reason of the patentee claiming in his specifications as his own invention, more than he had or shall have a right to claim as new, if the error has, or shall have arisen by inadvertency, accident, or mistake, and without any *fraudulent or deceptive intention*, it shall be lawful for the commissioner, upon surrender to him of such patent, and the payment of the further duty of fifteen dollars, to cause a new patent to be issued to the said inventor for the same invention, for the residue of the period then unexpired, for which the original patent was granted, in accordance with the patentee's corrected description and specification."

And yet, in defiance of this, he boasts that the soul of the thing is a *secret*, (will this dodge sell it?) and, I may further add, that if his work is like that exhibited in Cincinnati, a secret not worth knowing.

Let us review the subject. In the first place, he makes application under the law for a patent, and, is required by law to give a full, clear and exact description, &c.; and furthermore, to *swear* that he is the original inventor of the art for which he solicits a patent, which he has or should have done, he obtains a patent, and coolly informs those persons who have a right to the process after his monopoly has expired, which monopoly is granted him for the faithful observance of the law in its requirements, it cannot be done according to my specifications. I have purposely withheld that which is necessary to success; or, in other words, I have used letters patent as a decoy duck to sell you a secret. Very sharp practice if it was worth anything; but he has overreached himself; for, even were it a good thing, the second section of the law quoted would prevent him from getting a *valid* patent, were it of sufficient importance to oppose; he having acknowledged that it was not through inadvertency, accident, or mistake, that the specification is defective; but from design. In his brag, he labors hard to get himself before the profession on certain terms, which he himself makes; for instance, to test the strength of his work, and "*neither piece to be marred or injured in any way*," and by ruling out the very work that I brought in opposition to it, viz: tin. See Dental Register, July No., page 25, objection 3; and, in the second place, to have it placed beside *ordinary* gold work single gum teeth, I presume taken from the mouth of a patient, who is to go without their teeth for a week, to prove what every intelligent dentist knows, that, fitted ever so carefully, the piece will be in just the same condition, with the so-called improvement; having admitted the fluids of the mouth in the interstices from whence ordinary cleaning would not remove the putrid and offensive matter, "presenting a beautiful appearance of cleanliness, but in reality, filthy beyond description." Very cute, in our very cute brother Slayton, but the brag won't do. I would not accept the proposition, even were I *allowed* to present such work as I know is comparatively free from the objection named, for the simple reason that a gentleman never accepts a proposition accompanied by a threat.

WM. M. HUNTER.

THOUGHTS FOR DENTISTS.

BY DR. WM. A. PEASE,
Of Dayton, Ohio.

Road at a Meeting of the Mad River Valley Dental Association, and published by its request.

GENTLEMEN: — The business of a Dentist is peculiar and distinct, in many important points of view, from that of any other profession, business or craft. The distinguishing characteristics are all adverse to his interests. They are so anomalous in character, that they can seldom be reached or corrected, by the ordinary rules that govern professional or commercial life; and the Dentist finds himself, therefore, isolated beyond the pale of the law and custom in many important particulars that are vital to him, while he himself is bound by all the rules and customs that govern professional life. This peculiarity of position is not only annoying; it is a positive evil, that subject him to frequent and serious losses, for which the law affords him no adequate remedy or redress; and, perhaps, what is equally injurious to him, it tends to destroy his confidence in the morality and honesty of man, if not to induce a certain laxity in himself. These evils can only be remedied by concert of action, or a generally recognized code of ethics. So long as the Dentist does not vindicate his own rights, but, however unwillingly, continues patiently to suffer these evils, he will find enough of those who will be willing he should, who will add, in an ironical tone, that a little suffering is good for the spirit.

Where there is a community of wants and interests, there must be a community of action; not only in reference to the government of the relations with the outward world, but also those of the individual members. So long as the Dentist acknowledges no higher code of law in his professional intercourse than that of Ishmael, he must not expect others to respect what he seems to be profoundly ignorant of himself, or what he holds in as profound contempt. Men respect those who habitually respect themselves; and, as there is a current opinion that the safety-valve of self-appreciation of each individual or profession, is set at the highest point it will bear consistently with safety, it cannot be expected that the community will have a very high opinion or appreciation of those who presistently depreciate the skill and the value of the services of each other, or who place so low a value on their own services as to rank them with those crafts where the remuneration is only measured by the wear and tear of muscle. Every profession should be idealized by each individual member thereof. In this respect, the law is especially worthy of commendation. The lawyer never asks, how much can I curtail my wants, that I may reduce my fees? but, how many high and noble wants can I create, that I may increase my fees in a like proportion? A lawyer never looks towards the minimum, but always towards the maximum fee, some distinguished man has obtained, and he crowds a point to make his equal that. Thus, there is an exhilerating professional atmosphere around its members, which strengthens, tones up, and develops powers and faculties to a point they otherwise would not attain. Besides, a lawyer seldom speaks disrespectfully of his brethren, or seeks to create a doubt as to their honesty or skill, as is too often done by physicians and dentists.

If such are the rules which govern a large, intellectual and powerful profession, whose chief business is to maintain the equalibrium of justice between man and man, how much more should similar rules be adopted by one to whose care so important interests, affecting, not only the purse, but the life, health, good looks; nay, the very individuality of members of community, are confided, without bonds or sureties, but simply on a reliance that its members are skillful, faithful, honest and honorable men?

The desire of dentists to have numerous calls—a bustling and crowded office, and the external appearance, at least, of a large and lucrative business, has fostered a disposition on the part of community to cheapen, and, perhaps, created a belief that the man who is satisfied with the smallest consideration for his services or skill, like the merchant or green grocer, is the one to be patronized. They seem to assume that skill, honor and integrity, like wares and marketable commodities, and that whoever has them for sale, at how low soever a price, has an article as similar to all others in the vicinity, as the goods in one store resemble those in another. For this, dentists are responsible. So long as they will continue to cheapen their labor to suit the importunities of their patients, they can make but little progress towards elevating the profession or themselves. It is now too often the case that a person starting for a dentist, goes as he would to purchase dry goods—to cheapen—and he will visit half a dozen offices before deciding.

Thus—A. B. Good morning, Doctor. I want a set of teeth. What is your lowest price for making one?

After a careful examination of the mouth, the price is named; and, if he is an honest and honorable man, it is such as he usually charges, and will afford him a fair and reasonable profit, and one he will not depart from to secure the set.

A. B.—Well, I am out this morning looking around. I'll look a little farther before I decide. If I can't do any better, I'll return. And away he goes to B. C.

A. B.—Doctor, I want a set of teeth. What is your lowest price for making one?

Another examination; the price is named, when A. B. exclaims:

That's high! Dr. —— will make them for less, (perhaps naming a smaller price than the Doctor actually fixed for the set.

Well, says Dr. B. C., I can make it as cheap as he can, and I will make it for so much; a still lower figure; and, besides, I will offer you this additional inducement. You have undoubtedly heard and read in the papers, that I have recently made several valuable discoveries; indeed, they are most marvelous; so much so, that the learned, able and conscientious editor of the Daily Puff-Well-For-Pay, came to see them, and he was so much pleased with them, that he has published a glowing account of them. Indeed, sir, it is my own opinion, and that also of my friends, that I will make a fortune from the sale of rights, and retire from business in a year. But, what I was going to offer you by way of inducement, and also to introduce it here, is a decided improvement. It is no less than an addition, or appendage, that I apply to all my sets of teeth. Why, sir, it is nothing less than a Patent Digestor, Chyle-Separator and Rejuvinator. It saves all the trouble of eating, one-half the food, and makes you grow younger every day—in fact, sir, I believe those who wear it will attain the very respectable age of Methuselah. They can't die—they can't die; they will have to be killed, or carried off bodily, to get out of the world! Besides, sir, I will make the set with my newly-invented and patented Double-Inflated, Double Safety-valved, Six-Horse-Power Engine. It always makes accurate fits, and never cracks the teeth!

But, A. B. thinks he will look for greater inducements elsewhere—he will see; and, true to his determination when starting from home, he employs the man who will work for the least money, and at the same time throw in the most Patent Digestors, &c.

Now, what is that man's opinion of dentists when he return home? Is it favorable—such as honorable men should desire? Is it not, that they are a set of sneaking, cheating Jews, who will cheat one for a farthing; and, furthermore, that they ought to be despised and kicked by every honest man?

It is high time these things should cease. It is high time dentists should learn to respect themselves and their patients, and, when consulted, state clearly, calmly and honestly what is required, and the exact price they demand for their services, and then refuse to depart from it. It is true, this course will seem odd at first—will be like a new life to many dentists and their patients. They will hardly know what to do with themselves, and their patients will open their eyes in mute astonishment—they won't know what to make of it; and when they get their things on, and get to the door, and the dentist still remains firm, don't fall a cent, don't offer to throw in any of his superior improvements—Patent Digestors, &c., &c.—they will begin to doubt his sanity. But, he need not expect that they will come back and order the set ef teeth from sheer admiration. No, no! not they! They will leave from mere force of habit and early education—they are bound to go the rounds this time. The Dentist has been too good a school-master; he has taught too thoroughly to have his teachings forgotten and disregarded so easily as this. Well, let them go; let others come and go in the same way; for so they will do; but don't flinch; keep a stiff upper lip, and bid them adieu as politely and calmly as if you had made your accustomed fee; for, remember, these persons are to be your best patients hereafter. You have lost them this time; you will loose others in the same way—you will think it is ruining you; that you are deserted, and have lost caste; but it is not so; if you have a strong back-bone, and you put your prices up instead of down, and stick to them; and, above all, don't offer to throw in, by way of inducmeent, any of your great improvements—Patent Digestors, &c.

After this period of probation is passed, you will see your profits represent your skill rather than your wasted purse, and you will begin to make money.

As a base for some further observations, I will here submit some propositions that should govern every office. I cannot see how a society can cohere without some such universally acknowledged rules among its members; viz:

Whenever a person calls to have teeth extracted, for an artificial denture, charge and collect at the time the price for extracting the teeth; say fifty cents a tooth.

Whenever a person calls to have a nerve destroyed, collect fifty cents for your service before he leaves the office.

Whenever a person calls for an artificial denture, whose mouth is already prepared, ask if the teeth were extracted by a neighboring dentist; if so, politely inform him you are not at liberty to set a price, or make it.

Whenever a person calls for an opinion as to the quality of a set of teeth, or the price he should have paid for it, unless glaringly defective, do not criticise it, or say he paid too much.

Never warrant a set of teeth, or a plug, for a day.

There are many other rules I would like to see universally adopted, but which may not seem equally as obvious to others. In regard to the first proposition, I wish to say, most dentists lose considerable sums every year; much larger than they think, unless they keep a record and examine it, by not adhering to this rule. All persons who have their teeth extracted and never return for the set of teeth, do not go to other dentists; some die, or leave the place; and others never have them inserted. Unless you have an open account with the person, ask for your fee before he leaves the office; and, if desirable, state to him the set of teeth will cost as much less when it is inserted.

The labor and cost of plugging a tooth where the nerve is destroyed, is so great, and the price is so low comparatively, though necessarily higher than other plugging, this method makes the fee seem more reasonable, as there is an open charge for two distinct services—besides many people never return to have the tooth plugged.

Lastly—Never warrant your operations. State distinctly to your patients that your charge is only a reasonable compensation for your present service; that if they break a tooth or a set, they wlll be charged a reasonable price for repairing it. Make your plugs stick, but do not warrant them to do so.

These propositions, for the government of the Dentists of this vicinity, are respectfully submitted to your consideration. If you see fit to modify, or adopt other and better ones, and also raise the price for dental operations, it will be gratifying to me, and I will say, in sporting phrase, "I will see you and go a little better."

Correspondence.

Messrs. Editors:—Permit me to say to you and to the profession, through you, a few words respecting our Conventions, both past and prospective; and first, I would remark that I altogether approve of the spirit of large Democratic Republicanism which prompted and guided the founders of the institution, in its formation, if that may be called an "institution" which acknowledges no written law or creed. Furthermore, I claim to sympathize with the feelings of kindness and liberality that have thus far characterized the meetings of the Convention, and in some degree to participate in the sentiments of generous rivalry that should stimulate those who are thus associated, to aspire to something worthy the favorable regard of their professional brethren and the public generally. The perennial fountain of information that has its sources in the observation and experience of the whole profession is not the least or last of its advantages; but while these and many other inducements are tendered to all who choose to participate in the meetings of the Convention, still there are some small annoyances, that would scarcely merit attention, only that like corruption in politics, like disease in the vital organs, or decay in the dental organs, or weeds in agricultural operations, they exhibit a tendency to increase, overgrow and monopolize every thing valuable, and consequently, the sooner they can be put down, the better.

One of the annoyances to which I refer is the indomitable propensity that some members manifest to speak on every topic that is up for discussion. Sometimes we hear remarks that many of us have heard repeated from the same lips annually, time out of mind; sometimes these remarks may appear pertinent enough to those who chance to hear them for the first time, but too often they appear more like a rehash from some old lecture originally prepared for the instruction of a class of dental students, who were waiting to be initiated into the mysteries of the science. Some evade the rule restricting members to one speech, by taking advantage of parliamentary usage to rise to explain, or ask an explanation, to repeat something that they had already said, and supposed, of course, the audience had forgotten, or to ask some one to repeat something that they themselves had heard and forgotten within the last half hour. It would, no doubt, appear to a disinterested spectator as if their only aim was to occupy the time, distract the attention, and embarrass the labors of the Convention.

Messrs. Editors, I lay claim to a fair share of charity towards the infirmities of my unfortunate fellow-creatures, when I see those infirmities accompanied with a moderate proportion of modesty; but when I see individuals obtrude their stupidity unnecessarily on those who can hear and understand and remember, I can not but regard it as decidedly annoying. It is generally thought to be a very disagreeable trick in a youth of tender years and small stature to require that every thing that he may chance to hear pass between older or more intelligent persons than himself, be repeated for his individual benefit; but when by a long course of indulgence, this grows into a confirmed habit, and in the mean time the boy grows to be six feet high and lubberly in proportion, the flagrancy and magnitude of the offense increase, in full proportion, with the size of the offender.

In conclusion, permit me to suggest as a remedy for these grievances, that hereafter the members take their seats in order as they subscribe their names and pay their dues, and instead of discussing the various branches of dental theory and practice, in the order in which they naturally occur, let each member be called on in regular order for whatever he may have of interest to the profession, reports of rare or difficult cases, with treatment, success or failure, with inferences, suggestions, etc., limiting to 10 or 15 minutes, and securing from perplexing question or other interruption; new modes of operation, materials or appliances; new theories of diseased or healthy function; even "the moulting of the temporary teeth by atrophy" might be introduced at the risk of the publisher. After each one has had opportunity to say what is uppermost in his mind, devote a session or two to the discussion of such topics as may be thought worthy of special consideration, permitting each member to speak in regular order, without interruption or catechization. There is ample opportunity outside of the Convention to advertise such inventions as are offered for sale to the profession, especially when the profits arising from the sale of such inventions are secured to their authors, under the sanction of the Patent Laws.

If the difficulties to which I have alluded can not be avoided in future, I for one, venture to predict that the enterprise must ultimately prove a failure. OLD RASP.

DETROIT, October 15th, 1859.

MESSRS. EDITORS,—*Dear Sirs:*—The fifth Annual Meeting of the Michigan Dental Association will be held in Detroit, on Tuesday, the 10th day of January next, at 7 o'clock, P. M.

The Committee appointed to select subjects for discussion, report the following:

Difficult Dentition; the effect of Diseased Teeth and Gums on the general health of the system; the proper treatment of Diseased Gums; and the best method of arresting decay in Teeth.

The Committee would intimate that each member of the Association write out what he wishes to say on the above named subjects, to be placed on the records of the Association. If each member would act on the above suggestion, it would make our meeting much more interesting and profitable to the profession.

As there are many new improvements or auxiliaries being introduced to the profession, these meetings can not but be of much interest to every member of the Association, and a large attendance is expected.

Respectfully yours, L. C. WHITING, Sec'y.

INDIANA STATE DENTAL ASSOCIATION.

Report of Committee on the order of business for the meeting to be held at Indianapolis, the first Tuesday in Jan., 1860.

1st. Reading report of last meeting.
2d. Treasurer's report.
3d. Report of Committees.
4th. Election of Officers.
5th. Installation of Officers.
6th. Appointing Committee.

DISCUSSION.

Prop. 1st. Should Pivot Teeth be inserted? If so, under what circumstances and in what manner?

2d. Treatment of inflamed Dentine.

3d. Treatment of Dental Periostitis and Alveolar abscess.

4th. Mechanical Dentistry, including all the various modes of constructing Artificial Dentines.

5th. Filling Teeth.

6th. Professional intercourse.

7th. Unfinished and Miscellaneous business.

The Committee would respectfully urge the profession throughout the State to attend this meeting, as matters of considerable moment to all practising Dentists will be discussed, as for example, the establishing of a uniform *fee bill*, etc., etc.

J. P. ULERY,
A. M. MOORE, } *Committee.*
W. R. WEBSTER,

Selections.

PHYSIOLOGY AND PATHOLOGY OF THE NERVOUS SYSTEM.

DR. BROWN-SEQUARD.

The principal points which Dr. Brown-Sequard endeavors to establish in connection with the physiology and pathology of the central nervous system are these:

1st. Excitations of the anterior roots of the spinal nerves may be a cause of pain, because these roots, being motor, produce a *cramp*. The pain due to this cramp is what has been erroneously called *recurring sensibility*. Cramps, and several other kinds of painful spasms (of the uterus during parturition, of the sphincter ani in certain cases, &c.) are painful on account of a galvanic irritation of sensitive nerves accompanying muscular contractions.

2d. Our movements seem to be guided by the peculiar sensations we derive from the galvanic irritation of certain sensitive nerves of muscles, while they contract.

3d. The power of transmitting sensitive impressions exists in many parts which are not able to give pain or any other sensation when they are excited by our usual means of irritation; so it is with the gray matter of the spinal cord and with many parts of nerves, which, however, are conductors of sensitive impressions.

4th. Hyperæsthesia is a constant result of certain injuries or alterations of the posterior parts of the cerebro-spinal axis, from the tubercular quadrigemina down to the lower end of the spinal cord.

5th. The transmission of sensitive impressions, in the spinal cord, takes place chiefly through the gray matter, and partly through the anterior columns; but, before reaching the gray matter, the impressions, in a certain measure, pass through the posterior columns.

6th. The conductors of sensitive impressions from the trunk and limbs decussate in the spinal cord, and not in the encephalon, as was universally admitted.

7th. Although the spinal cord is greatly altered or injured, sensibility, more or less diminished, may persist everywhere, on account of a peculiar arrangement of the conductors of sensitive impressions.

8th. The various kinds of sensitive impressions seem to be conducted by quite distinct nerve-fibres, in the nerves and in the nervous centres, and the place of passage of some of these conductors in the spinal cord seems not to be the same as that of the others, but none of them go up to the sensorium along the posterior columns.

9th. In the upper part of the cervical region of the spinal cord, near the medulla oblongata, most of the conductors of the orders of the will to muscles are in the lateral columns, and in the gray matter between these and the anterior columns.

10th. The voluntary motor conductors decussate at the lower part of the oblong medulla, and not all along the median line of the base of the encephalon.

11th. The posterior columns of the spinal cord have a great share in reflex movements, and this is the principal cause of the peculiar kind of paralysis so often observed in cases of alteration of these columns.

12th. The effects of excitation of the vaso-motor nerves consist essentially in a contraction of blood-vessels, which is followed by a diminution in the quantity of blood, in the temperature, and in the activity of nutrition. The effects of interruption of continuity of the vaso-motor nerves (*i. e.;* their paralysis) consist essentially in a paralytic dilatation of blood-vessels, which is followed by a greater afflux of blood, an increase of temperature, and a greater activity of nutrition.

13th. As a great many vaso-motor nerve-fibres go up to the brain, and to the cerebellum along the spinal cord, the medulla oblongata and the pons Varolii, the diseases or injuries of the various parts of the cerebro-spinal axis, besides symptoms concerning sensibility and movement, present symptoms, depending upon irritation or paralysis of vaso-motor nerves; contraction or relaxation of blood-vessels, diminution of temperature, alterations of nutrition, of secretions, &c.

14th. Besides the influence of the nervous system upon nutrition, absorption, and secretion, through the vaso-motor nerves, there is another, which seems to consist in changes in the elements of the tissues—changes producing various modifications in the quantity of blood attracted, and in the interchange of materials between the blood and the tissues.

15th. The absence of the influence of the nervous system on any part of the body is hardly a cause of other alterations of nutrition than atrophy, while the irritation of the nervous system is a most powerful direct or reflex cause of a great many morbid changes in nutrition, secretion, &c.

16th. The sympathetic normal and morbid changes of nutrition, secretion, &c., are reflex phenomena, the study of which shows how many diseases are produced by a reflex action, and how a rational mode of treatment might be arrived at.

17th. The loss of consciousness in simple vertigo or in complete attacks of epilepsy does not depend upon a disease of the brain, but upon a contraction of the blood-vessels of the cerebral lobes—contraction due to some irritation of the vaso-motor nerves of these vessels, either by some direct cause irritating them in the base of the encephalon or the spinal cord, or by a reflex influence.

18th. Much more frequently than has been imagined, all the following affections may be produced by a peculiar kind of irritation starting from almost any centripetal part of the nervous system: epilepsy, the various forms of insanity, chorea, catalepsy, hysteria, tetanus, hydrophobia, &c.

19th. The medulla oblongata is neither the only nor an essential nervous centre for the respiratory movements.

20th. There are a great many nerve-fibres and nerve-cells in the medulla oblongata, the pons Varolii, and the other parts of the base of the encephalon, which are not employed in the transmission of sensitive impressions or of the orders of the will to muscles, and are endowed with the singular property of producing, after even a slight irritation, a *persistent* spasm in certain muscles, and especially in the neck. Rotatory convulsions very often depend chiefly upon the production of such spasms, and in changes of the blood-vessels of certain parts of the encephalon.

21st. The irritation of the auditory nerve may cause rotatory or simple clonic convulsions.

22d. The conductors of the orders of the will to muscles, of the sensitive impressions, and of the nervous influences to blood-vessels, decussating at different places in the cerebro-spinal axis, various symptoms are to be observed, depending upon either the irritation or the paralysis of these three kinds of conductors, according to the part of a lateral half of the cerebro-spinal axis where an alteration exists.

To the Editors of the New York Dental Journal:

Sirs: I beg to call your attention to the Amber Bases for Artificial Teeth, which are secured to me by three distinct Letters Patent, that is to say, by Letters Patent No. 19,916, dated April 13, 1858, by Letters Patent No. 24,544, dated June 28, 1859, and by Letters Patent No. 24,545, dated June 28, 1859.

The great usefulness of this invention for dental purposes, and its superiority over the existing methods of forming a base for artificial teeth, consist in the following points:—

1st. The Amber composition is tasteless; it causes no excitement of the glands; it creates an agreeable feeling in the mouth, and emits no odor.

2d. The contact between the Amber Composition and the mouth is not injurious to the health, and acts as a preventive against some diseases, such as inflammation of the throat, etc.

3d. Being a bad conductor of heat, it does not cause that certain feeling of chill in the mouth, which metal bases create.

4th. It is not liable to oxydization, corrosion or solution by the action of stomach acid or of saliva.

5th. It is capable of bearing an extreme degree of heat, without suffering any injury therefrom.

6th. It can be easily cast into any shape suitable to the mouth; it is not liable to bend; it always retains its form; and for these reasons it affords greater security for its retention in the mouth, and increased facilities in chewing.

7th. Being enabled to firmly unite the artificial teeth with this composition without the use of any other cement or solder, by uniting them before the composition becomes hardened, I obtain a compact body, and avoid porous between the teeth and their base.

8th. Being enabled to represent an exact imitation of flesh color in my amber compositions, I can produce compact, continuous, and homogeneous gums *without the aid of any gum teeth whatever.*

9th. There being no sulphur used in my composition, it is superior to vulcanized Rubber or Gutta Percha, as it emits no disagreeable odor.

10th. The profession is well aware of the fact, that vulcanized Rubber or gutta parcha bases represent so bad an imitation of flesh color that it is always necessary to represent the gum by a coating or lining of porcelain; and in this particular also my Amber Bases are superior.

These and other advantages will secure to this Amber Composition a preference over all other metallic or nonmetallic bases, and I am confident that all professional dentists will find it advantageous for themselves and their Patients to employ amber, instead of metals, India Rubber or Gutta Percha.

To give a correct idea of the process and of the composition of matter constituting the new invention, I refer to the specifications annexed to the three patents above mentioned, and I will confine myself here to a statement of some of the principal points of the same.

The first Patent, No. 19,916, refers to the manner of compounding and shaping the amber composition, and a resume of the invention is thus expressed: "What I claim as new and desire to secure by Letters Patent is, making the base for artificial teeth of a composition of matter in which AMBER forms the principal ingredient, in the manner substantially as described."

The second Patent, No. 24,544, says: I add to one pound of amber, treated as described in my former Patent, about one-half pound of pulverized *Sulphate of Alumina*, about one-half pound of *purified Linseed oil*, about three-fourths of a pound of Gutta Percha or Caoutchouc, and about one-fourth of a pound of a mixture of metallic colors most nearly resembling the color of the natural healthy gum."

"The compound thus formed may consist of the following combinations: Sulphate of Alumina in combination with Amber, Caoutchouc or Gutta Percha, and linseed oil, with or without coloring matter; or Sulphate of Alumina in combination with amber and linseed oil, with or without coloring matter; or Sulphate of Alumina in combination with Caoutchouc or Gutta Percha, with or without coloring matter."

* * * * * * *

"What I claim herein as my invention and desire to secure by Letters Patent is, the composition of matter consisting of

Sulphate of Alumina and other ingredients, substantially as described for the purpose set forth."

My third Patent, No. 24,545, for an improvement in the coloring process, contains the following passages:

" My attention was first drawn to the necessity of providing some means for giving color to compounds intended to represent artificial gums by the bad representation of flesh color in the existing artificial gums. The compound termed "Coralite" consists of Gutta Percha, Sulphur, and some other coloring matter; another compound, termed "Vulcanite," consits of India Rubber, Sulphur, and coloring matter, but the dental plates thereby produced are so imperfect in regard to their color that it is generally necessary to coat them with porcelain in the same manner as metallic gums are coated, by which their weight is greatly increased and their shape impaired."

* * * * * * *

"What I claim as my invention and desire to secure by Letters Patent is, developing the color of a cured or hardened composition by the agency of solar light when the coloring matter is incorporated into the said composition while in its plastic or uncured state substantially as described."

It will be seen from these extracts, that my Amber Composition is entirely independent of and different from the India Rubber or Gutta Percha compounds, which have hitherto furnished so much food for Controversy, and those of my colleagues who have tried the amber composition for dental purposes are unanimous in giving it the preference over all others applied to the same purpose. Indeed, any dentist comparing the amber sets with those of India Rubber or Gutta Percha, will be enabled to satisfy himself about their respective merits by mere inspection.

Respectfully yours, etc.,
GEORGE DIEFFENBACH,
Surgeon Dentist, 389 Canal Street, New York.
New York, August, 1859.

* * *

NEW DISCOVERY.—Mr. R. Smith, chemist, of Blackford, has of late discovered a process for converting the brown sugar of lead into the white acetate of lead. The process is said to be easily managed, and it may be anticipated that this process will be of great advantage to mnnufacturers, calico-printers, and others. Nor is this all. There are two new compounds formed during the process of great interest. The one is a beautiful scarlet-colored pigment, and the other is a yellow. These colors are well adapted to all kinds of oil painting, water coloring, and paper painting. We have had an opportunity of seeing the colors, and in our opinion they are very fine. The scarlet is equal to vermilion, while the price of it will not exceed the one-third of that substance.—*Stirling (Scot.) Journal.*

DISCOVERY OF THE ANÆSTHETIC EFFECTS OF CHLOROFORM.

A writer in the Household Words gives the following description of the discovery of the powerful anæsthetic properties of chloroform:

To Professor Simpson, of Edinburgh, belongs the distinguished credit of introducing chloroform, which has nearly superceded all other anæsthetics. Possessed with the notion that something better than ether existed in the chemical world, the professor set about deliberately to examine any volatile substance which afforded a promise of revealing the required properties. Various gases and liquids were experimented upon; and at last chloroform—a ponderous liquid which provoked no great expectations; and only known as a chemical curiosity in the laboratory—was brought to the trial. Doctor Simpson, with his two assistants, sat down late one night, after an arduous day's toil, and when most physicians, as well as patients, were wrapped in sleep, began to inhale various substances which had been collected. A small bottle of chloroform had been raked up out of some obscure corner, and was to take its turn with the rest. Each experimenter provided himself with a tumbler or finger-glass, a portion of each selected fluid was poured into the bottom of it, and the glass was placed over warm water to favor evolution of vapor. Holding the mouth and nostrils over the vessel, these votaries of science courageously explored this *terra incognita* by inhaling one vapor after another. At last each charged his tumbler from the small bottle of chloroform, "when immediately," says Professor Miller, "an unwonted hilarity seized the party;

they became bright-eyed and very happy, and conversed with such intelligence, as more than usually charmed other listeners who were not taking part in the proceedings. But suddenly there was a talk of sounds being heard like those of a cotton-mill, louder and louder; a moment more, then all was silent, and then—crash.

"On awaking, Dr. Simpson's first perception was mental: 'This is far stronger and better than ether,' he said to himself. His second was to note that he was prostrate on the floor, and that his friends were confused and alarmed. Hearing a noise, he turned round, and saw his assistant, Dr. Duncan, beneath a chair, his jaws dropped, his eyes staring and his head half bent under him; quite unconscious, and snoring in a determined and alarming manner. More noise still, and much motion, and then his eyes overtook Doctor Keith's feet and legs making various efforts to overturn the table, or more properly to annihilate every thing that was on it.

"All speedily regained their senses, and from that day, or rather from the middle of that night, dates the discovery of the marvelous properties of chloroform."

Editorial.

ANOTHER LOCAL SOCIETY.

The dentists of Mad River Valley and vicinity, have organized a society to meet quarterly on adjournment. It held its first regular meeting in Springfield, November 17th. Nine members were present, three essays were read, and a free exchange of professional opinion took place. The next meeting will be in Xenia, on the afternoon and evening of January 5th, 1860. We would be happy to see a full attendance of the profession in the vicinity.

W.

SANDER'S COMPOUND.

Those who attended the Convention at Niagara, and those who read our report of the discussions, recollect that Dr. Forbes introduced to the notice of the Convention a compound for filling teeth, suggested and prepared by Enno Sanders, a chemist of St. Louis. Dr. F. kindly furnished us some of the material, which we have carefully tried, but find it will not answer the purpose. It promises pretty well at the start, but becomes porous, and disintegrates. It is no better than our own experiments, in the same direction, in the spring of 1856, which we did not think worthy of public notice. We are sorry that this, too, is a failure; but we can make nothing else of it. W.

DECISION OF THE "HARD RUBBER" CONTEST.

By reference to a card in the advertising sheet of the present number of the Register, it will be seen that in the suite of the Hard Rubber Co. *vs.* E. A. L. Roberts, for infringement of Patent Right, has been decided, granting the injunction. An order of investigation has been issued in regard to the amount of work done by the defendant, and an order for the amount of profits upon the same, to be paid by the defendant to the plaintiff.

In regard to the details of the matter, we know nothing more than is stated in the circular. This decision will probably bring the indiscriminate use of this process to a check.

There may be developments that will change the aspect of affairs in future; of this, however, we know nothing. Those who wish to avoid difficulty, should regard the rights of others. T.

A PRACTICAL TREATISE ON OPERATIVE DENTISTRY. By J. TAFT, Professor of Operative Dentistry in the Ohio College of Dental Surgery. Philadelphia: Lindsay & Blackiston, Publishers.

The progress of Dental Science has been such that it is altogether impracticable to condense into the limits of a single book all that a good student expects to learn and has a right to know from reading; and hence, text-books devoted to the different departments of the profession, are a necessity of the age. In regard to the general principles of our professional science, very much can be learned by drawing on the literature of our parent, the medical profession; but when it comes to the practical application of our attainments to the wants of our race, it is evident that we must be self-reliant.

A want was felt by the whole profession, and especially by the younger members of it, in regard to Operative Dentistry. It is true that much had been written, and well written, on the subject; but as it lay in fragments all over the field of past periodical dental literature, it was not available, without great research. And, as it was necessarily mixed up with much that was common-place, if not useless, the mind of the student was over-taxed, and often, too, much perplexed by the research to discriminate clearly in regard to the merits of what he read. To supply this want, the work under consideration seems to be, in the main, well adapted. It goes over the whole field of Operative Dentistry, giving in detail the various modes of practice which are entitled to consideration.

The work is divided into thirteen chapters, and is so arranged that reference to any subject contained in it is easy.

It is not our purpose to notice at length or minutely, the various positions and doctrines laid down by the author. Long and intimate association has made the writer very familiar with his sentiments ; and while we would not agree with every one of these, it would be somewhat strange if we should disagree with many of them.

The first chapter is mainly introductory, but, withal, highly practical. The second dives right into the great subject, " CARIES OF THE TEETH," giving its general characteristics, its causes, its usual localities, its consequences, and its treatment. In speaking of black decay, the author states that the cause of the dark color is " most probably a metallic oxyd, as iron, sodium, potassium, and calcium are found in the saliva and mucus in several combinations."

This is hardly satisfactory ; for the oxyds of the last named three metals, *soda, potash* and *lime,* are *white,* while the sesquioxyd of iron, the one most likely to be found under the circumstances, is red.

The causes of caries, both predisposing and exciting, are clearly set forth, and its consequences are as faithfully depicted. A few pages on the general treatment of the disease closes the chapter, and brings the reader to the consideration of that most important operation of Dental Surgery, *filling teeth.*

The general principles of this operation are clearly discussed, the materials for filling, both proper and improper, are carefully considered ; and the villainous amalgams are, of course, condemned.

Chapter fourth is devoted to the consideration of instruments for filling ; and these are, perhaps, better classified than ever before.

But we have not time or space to notice the work in detail. All the important operations, in all their modifications, are clearly discussed by the author ; and the work is highly practical throughout.

The publishers have surpassed themselves. We have not before seen so neat a text-book. The type, paper, and especially the illustrations, are perfect. W.

THE

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Original Essays and Communications.

ESSAY ON CROWN CAVITIES IN MOLAR TEETH.

Read at the 1st Regular meeting of the Mad River Valley Dental Association, held in Springfield, November 17th, 1859.

BY GEO. L. PAINE.

By crown cavities, we mean those that are found in the grinding surfaces of the molar and bicuspid teeth. The decay generally commences in the depressions, when the enamel is congenitively defective.

We will take for illustration a small cavity in a first superior molar, which may be opened with a drill, which will, in many cases, remove all the decay. If, however, this end can not be attained by the use of this instrument, recourse must be had to others, such as excavators, with which every particle of decomposed dentine may and should be removed, prior to the introduction of the filling. The orifice of the cavity should be rendered smooth and slightly countersunk, rather than undercut, in order that a filling solid, and durable, may be inserted, and the preservation of the tooth thus secured at the point filled. The cavity being shaped to our liking, we may next describe our process of filling it with gold.

For the sake of being definite, we will describe our process of using soft foil, No. 4 or 6. We fold our sheet of gold into 4 or 6 thicknesses, cutting it into strips a little wider than the cavity is deep, next rolling on a 3 or 5 sided broach, these strips into cylinders, smaller in diameter than the cavity, making them successively smaller and harder.

Having washed out and dried the cavity, and adopted such precautions as will secure from moisture or saliva, the tooth to be filled, we will select one of the largest cylinders, and with our plugging pliers place it against the posterior wall of the cavity, and finally push it home, being careful that it maintain its position without change. We continue to introduce our cylinders against the wall of the cavity, condensing them as we proceed, till it is full; inserting the last, hardest and smallest in the center, thus rendering solid every part of the filling, from its circumference to its center. Lest our filling be not as dense as it should be, we will take a wedge or cone-shaped instrument, and force it into the body of the filling at the most yielding point and there introduce another hard cylinder, or adhesive gold—which we prefer to finish with. We next pass over the whole surface of the filling, a serrated condenser, in order to reduce irregularities, and consolidate as much as possible. The face of the filling may now be dressed down with a plug file, until level with the surface of the tooth, care being taken that there be no portions of the plug overlapping the tooth, as a nucleus for future decay. All the file marks may next be erased by rubbing the surface of the filling with a piece of Scotch stone, or a properly shaped piece of wood, carrying pulverized pumice stone and water, and after being washed to remove all grittings, it should be finished with a burnisher, occasionally dipped in a solution of castile soap. If our manipulations have throughout been conducted carefully and honestly, the result of our labor will be a substantial filling, which will resist the friction of mastication as effectually as solid and healthy enamel itself.

Second Modification.—In superior molars we often find a large cavity in the body of the tooth, while the orifice is small. We will, in this case, cut down with a gouge, the edges of enamel overhanging the cavity, in order to exhibit, and render accessible for removal, the decay, and secure for the border of the cavity a solid wall. We prefer to give our cavity a circular shape, avoiding, as much as possible, irregular shapes and acute angles under cuts, and ragged or brittle margins. The mode of filling is the same as described under the first modification.

THIRD MODIFICATION.—When it is impracticable to form a cavity cylindrical in shape,—but which has, as is sometimes the case, unavoidable undercuts, we must shape our blocks or cylinders so as to fill in these undercut portions, first making them as solid as possible, before we introduce our longer blocks to fill up the body of the cavity. Unless these undercut portions are well filled, the tooth will, ere long, break in, and require re-filling.

FOURTH MODIFICATION.—Crown cavities in second molars. (Superior.) In these teeth, we often find two cavities, which when the caries is all removed therefrom, there will be left between them only a thin partition of healthy bone. In cases of this kind, we prefer to cut this away entirely, and make of the two but one cavity. In these cavities, especially the posterior one, we find on the part of the caries, a disposition to run out into acute angles, following the sections found in the grinding surfaces of these teeth.

This decay must be followed up, no matter how angular our cavity may be, because the integrity of the wall must not be sacrificed to secure a cylindrical shape for it. In a word, that course must be pursued which will be most likely to secure the preservation of the tooth. There are other modifications peculiar to this class of teeth—such as anterior and posterior approximal, and buccal and palital, cavities running into crown cavities.

But as it does not come within our province to treat of these, we will turn our attention to crown cavities in inferior molars. We find, on examining these teeth, that the decay has a tendency to follow up the sutures, radiating from the central cavity, often involving the whole crown, insomuch that in some cases a large portion of the dentine must be cut away to arrest the progress of decay, and save the tooth,—hence large fillings are more frequently required in those teeth than in the superior molars.

Another modification of decay in these teeth is when there are divergent lines of decay. These lines are sometimes but slightly decayed, yet at their extremities, there often are pits, which are to be enlarged with a drill, the decay in the in the sutures or lines, removed, and the central cavity prepared in the usual manner. The pits are first to be filled, following up the sutures and ending in the central cavity. We regard it as wholly unsafe to leave a decayed suture unfilled, however slightly it may be effected—because neglect here, is fatal, not only to the crown cavity filled—but to the tooth itself.

THE PHYSIOLOGY AND PATHOLOGY OF THE MOUTH.

THOSE whose professional labors in good part are devoted to counteracting and repairing derangements and diseases of the teeth, do not require any arguments to convince them of the importance of a clear and distinct understanding of the physiology and pathology of the buccal cavity; for the actions in health and in disease, of the other structures of the mouth, and of the entire alimentary canal even, have an important influence not only on the natural teeth, but also upon the materials used by dentists in repairing the ravages of disease.

The mouth, in common with the entire extent of the alimentary canal, is supplied with

Epithelium,
Blood-vessels and Blood,
Nerves,

Muscles,
Mucus,
Water,
Media Solution.

It also has,

Glands, and
Saliva,

in addition to the more solid portions, which, however, have far more to do with the *Anatomy* than with the Physiology of the mouth.

The *Epithelium* of the mouth is in many regards like the *skin* which covers the body externally, but it is quite thin, delicate, and translucent, lying upon, yet scarcely concealing the papilæ. It is made up of minute *cells* whose sides are closed to each other and thus form *scales*, which are tipped down and lie upon each other very much like tiles upon a roof, in layers, and not in a mass. Each of these scales retains its characteristics as an individual scale, with an interval between it and its neighbor, and yet insufficiently intimate that the mouth may be subjected to a considerable amount of hard usage and yet receive no apparent injury, and the scales themselves not materially changed by ordinary mechanical or chemical impressions.

This entrance to the *prima vie* appears to be *paved*, so as to allow hot or cold food and drinks, acids and alkalies, fluids and solids of all kinds to pass on these scales over the papillæ, without making any apparent impression upon those delicate structures, while the interspaces between the pavement scales allow a free passage of the fluids in the mouth to be absorbed, or the fluids within the tissues to pass into the mouth. These epithetical scales are greatly modified in character and appearance by the nature of the fluid by which they are acted upon; those changes being the result of the action of the fluids upon the scales, and not of the epithelium upon the fluid.

On the tongue, the power of the mucous membrane to *form* epithelium is manifested in a marked degree. Usually large numbers of epithetical scales can be scraped off with the blade of a knife. And as this is very much more marked upon the tongue than upon parts of the mucous membrane lower down in the intestinal tube, a slight change in the stomach becomes quite apparent in the changed appearance of what is called the *coating* of the tongue.

If the epithelium is formed too rapidly, and is so tenacious as not to be readily wiped off with food, and especially if the individual does not take into his mouth any solid food to wipe off the epithelium, it must coat the tongue. If the end of the cell or scale remains quite adherent to the skin, while there is considerable moisture in the mouth, so that the scales do not lie down, but stand on end, like the pile on velvet, the tongue is said to be "furred." If the scales are less adherent, and fall down between the papillæ, become soft and swollen, the tongue will be even, smooth on its surface, and "creamy." If the epithelium is rapidly thrown off, or not readily formed, and especially if the parts beneath are inflamed, and the tongue becomes dry, it becomes red and "raw." If the blood does not circulate through the tongue readily from general debility, a loss of blood, or other cause, the tongue spreads out, becomes flabby, receives the impressions of the teeth, and has a "pasty" appearance.

We are not to suppose that the mouth alone is affected when these changes appear, but to reflect that the mouth is a part of the alimentary canal and in intimate relations with other parts of it and particularly with that portion of it above the pyloric orifice of the stomach, and that changes in other parts of the canal, quickly make themselves manifest by changes in the appearance of the mouth, and by observing the condition of the mucous membrane of the mouth we can often judge quite accurately of its condition lower down.

The *Blood-vessels* of the mucous membrane are almost infinite in multitude, and are situated immediately beneath the thin translucent epithelium, and are filled with blood, even the capillaries in this part of the system being of sufficient calibre to admit the free transmission of the red corpuscles of the blood. The blood, from the number of the red corpuscles in it is quite red, and the blood-vessels of the mucous membrane of the mouth are so very numerous that the amount of fluid within the vessels equals the amount of solids in the walls of the vessels and in the membrane, both combined. Hence the mucous membrane, including the blood, may be said to be half fluid.

But this fluid in the mucous membrane of the mouth, is by no means stagnant, as the waters of a marsh or bog, but circulates with a ceaseless activity which has much to do with the *absorption* of fluids from the mouth, for endosmotic absorption is greatly influenced both by the amount of surface of the enclosed fluid exposed to the endosmotic action, and the rapidity of the circulation of that fluid.

It is always well to bear in mind the conditions of governing endosmosis, and it is particularly important in connection with the physiology of the mouth in which endosmosis bears so important a part, and therefore the presentation of those *conditions*, in this connection, although somewhat digressive, can not be considered entirely out of place. In regard to the endosmotic circulation of fluids, through membranes, it has been observed:—

1. When a membrane is interposed between two fluids of different densities, the fluids will pass through the membrane in both directions, but the fluid will pass from the rarer fluid to the denser with far greater rapidity than from the denser to the rarer.

2. If the dense fluid is in motion, the activity of the current to it is increased in proportion to the activity of the motion in the denser fluid.

3. If the dense fluid is alkaline and the rare fluid is acid, the current through the membrane will be accelerated.

4. If the dense fluid is warmer than the rare one, the in-

crease of temperature will also aid in increasing the activity of the flow into the warmer fluid.

Not only is the epethilial membrane filled with large blood vessels, but as is admirably shown in the plates of Harsall's Microscopical Anatomy, and by Ford and Bowman, reproduced by Kolliker and Salter, and others, but the papillæ are supplied with loops of vessels that make up a large proportion of their entire bulk, thus increasing the amount of surface of membrane exposed to the ormotic action.

The conditions that favor the passage of fluids from the mouth through the epithelium and the walls of the blood vessels into the blood, are: —

The blood is more dense than the fluid within the mouth,

The blood is in active motion,

The blood within the vessels is alkaline, while the fluid in the mouth is usually acid,

The blood is usually more warm than the fluids in the mouth.

As liquid is being constantly poured into the blood-vessels, the blood would become less dense, and absorption impeded, but that there is an erroneous evaporation of water constantly taking place from the lungs and the skin, and no inconsiderable drainage through the kidneys. The kidneys, the skin, and the lungs are thus constantly engaged in removing water from the blood as fast as it is supplied through the mucous membrane.

There are other circumstances that have an influence on this ormotic or membranous circulation which are worthy of note. The activity of the motion of the blood is greatly modified by the condition of the nervous system. The sudden suffusion of the cheeks with blushes, or the palor produced by fright, are illustrations of the influence of the nerves upon the circulation; and there are certain substances that when brought in contact with the epithelium interferes with membranous circulation. Tobacco is a familiar illustration of this fact.

IMPRESSIONS.

BY DR. M. M. OLDHAM, SPRINGFIELD, OHIO.

Read at a meeting of the Mad River Valley Dental Association.

GENTLEMEN: I have a very common place subject, hence you need not expect anything more than common place remarks on it: yet to the practical dentist, it is a subject of importance, and holds a similar place in mechanical dentistry, that the corner stone and its fellows do to the superstructure. Unless you have a correct impression of the mouth, or of such parts of it as are to be covered by the plate, your artificial denture however skillfully made, and neatly finished it may be, will be found to be altogether worthless for any practical purpose in the mouth; for it can not be worn with comfort, or utility. It is therefore important that a correct beginning be made in every operation intended for the mouth.

Taking an impression of the mouth is a simple operation, yet one requiring the exercise of some care and skill, in order to be properly and accurately done. There are several things to be observed previous to taking an impression in order to make it a success. The first thing to be observed is the condition of the mouth, if slimy mucus covers the mouth, have the patient rinse it thoroughly with cold water; or if the lining membranes of the cavities of the mouth are thick, and yield ready to pressure on any part so that it may be changed by an impression, greater accuracy may be secured to it, by frequently rinsing the mouth with cold water for a minute or two, which will stimulate the tissues covering the palatal bones, to contract for the time, and thus afford a more unyielding surface.

The next thing is the selection of a proper vessel or cup to hold the material with which the impression is to be taken. This cup should be as closely adapted to the mouth as is convenient, so that as small amount of material, (and especially if it is wax,) as possible may be used, for if a considerable quantity is used, it will be cumbersome to the patient, and likely to produce gagging and consequently violent contraction of the muscles of the throat and face, and thus defeat the success of the operation. Again, if too much wax is employed, it will be forced out at the posterior part of the cup, giving the surface of the impression the appearance of lines or ridges which have no correspondence in the mouth, and is likewise liable to be pulled up or thickened, thus spoiling the correctness of the impression. The cup should also be sufficiently strong to bear the force without springing—to give a perfect adaptation of the wax to all parts of the mouth to be operated upon.

And further, much depends on the material employed and its preparation, in order to secure a correct impression. In all ordinary cases we think wax is preferable, on account of its convenience and pleasantness to the patients. If it is resolved to use wax it should be of the best quality of yellow bees-wax; we think the yellow preferable to the white, because it contains all its natural glutinous properties, so that when heated to a plastic state, it changes the shape of its surface with a smoothness, which adapts it very well for taking impressions with much accuracy. In preparing wax for an impression, much care should be exercised to bring it to the required plasticity, which may be done either by submerging it in warm water or exposing it to the heat of a spirit-lamp, taking care not to overheat the surface so as to destroy the tenacity, or render brittle and lumpy, for with wax in this condition a good and correct impression can not be obtained, for it will not readily adapt itself to the parts of the mouth as desired.

The temperature of the wax should be gradually raised, at the same time working or kneading it with the fingers, till the heat is regularly diffused through the whole mass, and it is rendered to as plastic a condition as desirable, which, if then properly applied to the mouth, can not fail to give in return a perfectly reliable impression.

If you resolve to take the impression with plaster, let it be of the best quality, such as will harden quickly; if good it needs no other preparation to fit it for use but to add as much water as will add to the consistency of thick cream.

The mouth being in a proper condition, and a suitable cup at hand, and the wax in a proper state of preperation, insert as much of the wax as is necessary to cover the alveolar ridge, and such parts as it is desirable to obtain a model of, molding it (the wax) with the fingers, to as nearly the proper shape as possible, then grasping the cup with the right hand, holding the handle firmly between the fore finger and thumb; with the left hand introduce a pearl or ivory spatula to clear the lips and cheeks out of the way of the cup. Insert the cup into the mouth, placing it as fairly over the ridge as possible; then with the first two fingers of the right hand, and with the first one of the left placed on the back of the cup, make firm and steady pressure till the wax has adapted itself to all parts. Allow the wax to cool and then remove with care from the mouth. We may add here, if taking an impression for a section plate, it will be well to have at hand some cold water and a sponge, so that when the impression is taken as above described, apply the sponge saturated with water, to the back of the cup to cool the wax, so that on removing it from the mouth it will prevent it from being pressed out of shape and thus spoiling the impression; and for further security in removing the impression from the mouth, it will be necessary to make an opening through the wax to the palate, so as readily to admit air between the wax and palate, and at the same time on attempting to remove it, to turn up the lip with a spatula or the finger so as to admit air at the border. With these precautions and a little address on the part of the operator, the impression may be readily removed successfully. These things observed, we seldom fail to get a good impression of such parts of the mouth as is desired.

There may however cases present themselves, in which it is impossible to get a correct impression with wax; in such, we must resort to the use of plaster. These cases are such as have soft places on the ridge or palates which yield so readily to the force employed in taking a wax impression that the natural form of the parts is not transferred. The use of plaster in such cases is preferable, because it can be employed in a batter like state, so as to need the application of but little force to completely embrace the desired parts in it, and from this a model can be obtained which will be a fac simile of such parts and a perfect adaptation of a plate to the mouth is secured.

PROFESSIONAL ADVERTISING.

BY C. C. DILLS.

"I remember a mass of things, but nothing distinctly: a quarrel, but nothing wherefore."

MESSRS. EDITORS:—In a recent article on "Dental Advertising *vs.* Dental Ethics," we protested against the tendency of some modern would-be dental ethics, to render unprofessional a more extended advertisement than "a simple announcement of the practitioner's name, title, and place of business." In doing this we confined ourselves to a few deductions from established rights and ethics—having bearing on the matter—deferring a consideration of it in its other bearing, till a time more expedient; meanwhile we have been pleased to note the continued agitation of such subjects as dental quackery, advertising, ethics, &c., &c.,—have been pleased to note the movement for "popular instruction,"—bearing with it the true principle of dental advertising—that of informing the uninformed of the importance and capabilities of Dentistry. And here we will be allowed to affirm, that we have *never* had any other view of advertising —however much we *may* have missed the *way;*—and when our more fastidious than discerning opponents would charge us with unprofessional or *selfish* advertising, and yet embrace the popular instruction method as *philanthropic*, we would expose their superficiality and show that the same "main spring of all human actions,"—the same *first law of our being—selfishness!* (not vulgar)—prompted alike their and our method;—we will be allowed to present these peculiar philanthropic motives, as mirrored by the *honest nature* of the *founder* of this new system of advertising. We quote—"This should all be free from any thing of an advertising character, and thus"—(or *that thus it may*)—"*have more weight*, and the more likely secure publication in the newspapers, as matter of general interest." Again—"Now all this done from *pure motives of good to the public*, uninfluenced by private interest or aggrandisement must prove beneficial to those by whom the writer is surrounded,—*and he be amply repaid eventually—as surely* as the farmer reaps where he sows."

"Consistency, thou art a jewel."

(The italicising is our own.)

Now we repeat, we are glad to see this advertising becoming "popular"; — we hail it as the dawn of a new era in dentistry here in the west. Now no longer will quackery live and have its being,—feast and wax strong,—upon "popular ignorance." And now peace and quiet to our risibles, we will no longer be ordered to extract one tooth and "plant" another,—or asked if filling teeth really does do any good, or if we really can put in false teeth to do any good, or, "now do tell, how do you fas'en them in when there aint another tooth in the head? I'v hearn them say you bored holes in the jaw bone, but I believe I'd stump it awhile first." And now peace and quiet to our better natures, we will no longer be "painfully impressed with the ignorance and consequent neglect on the part of the farmers," (aye and the *townsmen*, the lawyer and the *physician*, the preacher and his charge,) "with regard to their teeth." And again, peace to our credit, and luxury to our households, we will no longer *realize* that the quacks make the money, "while gentlemen of worth and scholarship and skill are barely making a living."

Surely, "There's a good time coming."

But *seriously* would we advocate advertising, and seriously would we consider the questions, How, and *to what extent*, shall we advertise? To the first we answer: We approve of the new method, as far as it is practical and consistent with itself, and only recommend that it be *added to* whenever and wherever it may prove inefficient in accomplishing its ends: *profit to all.* We want no other advertising than *facts known;* this we *do* want, and—if we mistake not the marked inquietude of the "dignified silence" with which the youth and energy of our profession is wont to "wait for the world to come to them"—*we will have it.* The supercilious and such as can afford it, may raise the hue and cry of unprofessionality! may quack quackery and quacks! may play on their harp of a thousand strings" (the m-e-d-i-c-a-l profession!) and make asses of themselves, may *ignore* circumstances calling for more energy, effort, *advertising* to secure business than they put forth; but before they become *earnest* in the matter and would *legitimate* their refinement, we advise them to review their forces, to call a national exclusive convention, and form an association which shall discard *mechanical* dentistry as *unprofessional*, and enjoin secresy of all improvements and discoveries made, as furthering the interests of all concerned.

The world may ridicule the advertising of a Barnum or Bonner, a Brandriff or Ayres, a Townsend or Janes, but it will hang its head for shame, and blush at its own stupidity at last.

Life *is* "earnest." Business is a part of life, and *advertising* is its *index.*

To the second we answer: *advertise to the extent the case may call for.* If you have already advertised to the amount of twenty-five years' successful practice, or are located within conventionalities' fastidious sway, where alike vulgar advertising is superfluous, *desist from it; but allow your less fortunate brother to advertise the more.*

However much or little you may advertise, know you are right in quality, and *go ahead.*

Now as we dwell for a moment upon the propriety of a *liberal* advertising on the part of the profession generally, and thus come in direct conflict with views entertained by those in the profession, *to whom* we owe all for its present advanced state,—we must insist we do so with a feeling of deep respect—amounting in many instances to a personal reverence for such persons, and only justify our course at all on the ground that, backed by the paradox, leaders are always in extremes,—we are satisfied their position in these matters is not only ultra and impracticable, but in many cases *over-bearing.* And when you would talk of *over-selfishness*, we would charge upon this class a positive and insufferable over-selfishness; inasmuch as they seem to dictate general and special ethics, *solely from their own limited experience and circumstances.*

It is desirable to ascertain just here, wherein we agree with, and to what extent we differ from the more *elite* of our ethical law-givers. To do this we will consider some of their specifications separately. They assume, first, that advertising is professional. In this we agree. There is no diversity of opinion as to the propriety of certain kinds of advertising. But, say our law-givers, secondly, this advertising should be limited to an "announcemnnt of the practitioner's name, title, and place of business." Upon this specification we are at issue. Say the law-givers, then you would advocate publishing a "long list of specified prices, from the pulling of a tooth to the extraction of a fang, from inserting a simple plug to the more difficult cases of the art. You would follow the dictates of popularity rather than conscience, would win the way by means other than those of experience and merit." No gentlemen, not so! These resorts of quacks receive *our* anathemas no less than yours. Well, then "you would furnish the country with almanacs, inform the world of your prodigious talents through the medium of the newspaper; you would manufacture gas as well as teeth." By no means; we hold all such evidences of quackery, gentlemen, in no less contempt than you; they in no sense enlighten the public mind, or benefit the community. The advertising we advocate is a *public*, no less than a *professional necessity.* We would have it unostentatious and truthful; would have it contain just such matter, and in just such form, as would serve to bring the public mind up to an enlightened appreciation of our profession.

(Herein lies philanthropy; let us embrace it, and not ignore, or sneakingly receive, the reward ever attending such.)

Another class of opponents more liberal than the above, agree with us as to the necessity of *information given*—the policy of advertising—but, by a strong circumlocution, would advocate that the information be given through the country press by means of "essays," "free from any thing of an advertising character," and "from pure motives of good to the public," &c. To all of which we would further object but little. The means and medium employed, and the results aimed at are the same as in other advertising. We only prefer doing directly what these gentlemen propose doing indirectly, and we submit, whether by urging these essays upon the country press for gratuitous publication, a suspicion (if the truth) may not arise that the profession is merely grinding its own axe at the expense of the printer,—is spunging its way to competency and favor. Now, however desirable it may be to keep out of sight the fact, we are compelled to admit our belief that personal interest underlays all the professions. If it is desirable to have it understood that the dental profession is merely a benevolent association, it may be done by the entire abolition of fees, and in no other way.

Now we beg to be shown *wherein consists the unprofessionality of the method of advertising we advocate*—one differing from these we have cited as acknowledged professional, only in *efficiency!* What we are contending for here is just this: That there be an acknowledged professional advertising of *gradations*, corresponding with the gradation of intelligence and wants of our respective localities. And, as collateral, that it be considered unprofessional—as it is illiberal—for any man, or set of men, to follow up a private opposition to any particular advertisement (coming within specified limits in *style*) by public expressions derogatory to the professional or private character of the author of such advertisement.

But we are reminded that we are a little fast here, are begging the question somewhat, and that our opponents are not dead, but ready for one more "master effort" against *all* advertising as such. We yield! and—"see how they run," —our law-givers turn out *en masse*, bringing with them the *medical profession*, and, combined, they produce a proof to a demonstration, a *syllogism: Quacks advertise;* quacks are unprofessional; *therefore*, advertising is unprofessional. Well, that's good! We retort:

1st, Indirectly. Rascals, villains, and the worst of men advertise in the business world. So do the best of men. Therefore the best of men are rascals, villains, and the worst of men.

2nd, Directly. Quacks advertise their "names, title, and place of business." So do professional men. Therefore, professional men are quacks.

But not to be foiled at their own game, they meet us again: *Professional* advertising is *limited.* Yours is not. *Therefore* yours is unprofessional.

Well, besides having destroyed this syllogism in having *limited* our advertising, we reply:

Unprofessional advertising is limitless. Ours *is* limited. Therefore ours *is professional.* But all such attempts to prove legitimate advertising unprofessional, reminds one of the unsuccessful attempt of a refined young man to obtain a *potatoe* of his neighbor at a dining table! Gent. "I say, stranger, can you reach those potatoes?" Stranger reaches forth his hand, finds he can, and replies "Yes." Gent, somewhat "sold," tries again, "Well, sir, just stick my fork in one of them!" Stranger does so, and leaves it there. Gent, ("sold again,") has him now, and says with an exultant air, "*Now sir, hand me my fork!*" Stranger deliberately does so, *leaving the potatoe.*

Still, many of our opponents (professionally weak kneed) linger, but to protest that we must not advertise so thoroughly, *because* our "mother profession" does not, *and we would court her favor.* Now here we would become *provoked!* would declare professional independence, self-reliance, *identity!* would want to know what we have to do with the *medical profession*, or it with us; or if a maternal "recognition" is insisted upon we want to know if *manifest merit* will not secure it more effectually than *ridiculous sycophancy.* We would want to know if the "eminently progressive and developmental character of our specialty" does not guarantee to it an everlasting *self-sustaining* endowment. And if it would not be well to "prove to the world that what is generally considered the only legitimate way to generate and develop the professional callings, is no more true than that all the bright children of earth have been begotten and born in legal wedlock"! Yes, we would want to know many things before giving this "protest" a serious consideration, but inasmuch as we remember that the number prostrate before this fatal Juggernaut is *fearful* we will be prevailed upon.

1st, Then, we would expostulate that our profession is so *peculiar*, we can not accept a precedent. (*Don't want one.*) 2nd, Our profession differs as widely from the medical profession as does *progress* from the law.

Now we will not say that we are not wholly and entirely *professional*, (that would be *heterodox*,) but we will say that there is nothing in the medical profession corresponding with our *mechanical dentistry*, which is ever and anon crying, "Progress, eternal progress! Reform! Excelsior!" and as earnestly proclaiming itself the "balm in Gilead" to "suffering humanity." If we have indeed a philanthropic chord in our souls, we would advertise our mechanical dentistry with its "very latest improvements," *faithfully*, and accept as our precedent the public benefactor any where. The dental profession is not to ignore the sufferings, ills and inconveniences, amounting in many instances to hazard of life and happiness, lying within its own peculiar sphere to alleviate, and a great auxiliary to which is proper advertising.

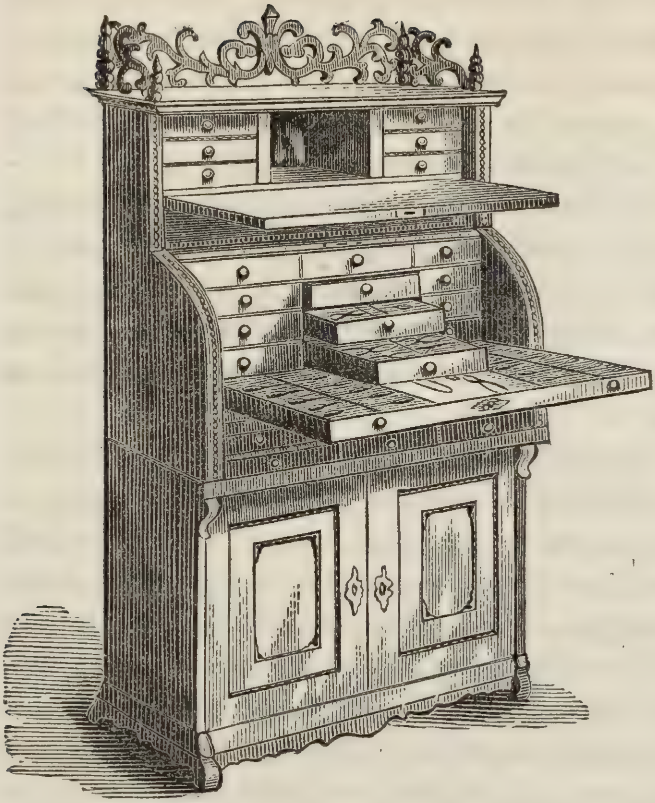
It *may* be more professional and humane for us to await in "dignified silence" "the world to come to us." Sluggishness *may* be an attribute of dignity, but if so, professional dignity is maintained at a fearful cost, both to the profession and the afflicted.

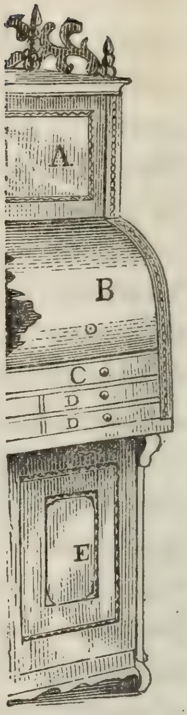
Conclusion: Our subject has been one worthy more experienced hands. But they have not—perhaps would never have—presented themselves. "Exciting causes" have prevailed with us. We are but just now realizing the extent and importance of our subject, the earnestness and sincerity of our endeavors. We have not written to encourage *quackery*, but to oppose *illiberality;* to foster *recklessness*, but the *reverse* in our ethics. Several important points we have merely alluded to, feeling that the familiarity of the profession with them, rendered detail—*of itself significant*—unnecessary. Some would have suggested a further handling of the matter "without gloves." By and by we may have the *manhood.*

DENTAL CASE.

The above figures represent a dental case, which we have had in use for about two years, and find it quite as convenient, in all respects, and more so in some particulars, than any case we have ever used.

Fig. 1 presents a front view with the different departments





open, except the lower portion. Fig. 2 is a view of a section of the same closed.

The top part is opened by throwing down its front, this then forms a shelf, or platform, upon which instruments can be laid at the time they are required for use.

In the centre there is a recess in which may be kept the various preparations, that are used in everyday practice. Upon each side of the recess are three drawers, in which may be arranged instruments that are not frequently used.

Immediately below this are three tiers of four drawers each. In these may be arranged in proper order, excavators, drills, files, &c. One of these drawers may be appropriated to gold, and another to other preparations for filling. Below these drawers is the main tray; it can be drawn out to expose the entire surface, which is as long as the front of the case and as wide as its depth. Into this tray are fitted the plugging and scaling instruments, mirrors and everything of this kind. When the tray is put back in its place, the whole is closed up by drawing out from immediately above the drawers, the convex cover represented at B in fig. 2.

Immediately below the tray are three tiers of two drawers each. These are used for forceps and instruments of this kind. In fig. 2, A represents the front of the upper part, closed, B represents the convex cover of the tray, and the drawers immediately above it. C represents the front of the tray, when the case is closed. D D represents the drawers immediately below it. E represents the doors. These two views give a good idea of the case both open and closed.

We like the case because there is a place for everything, and it is easy to keep each class of instruments in its proper place. These cases are manufactured at from $75,00 to $150,00, without instruments or trimming. T.

SERUM IN PULP CAVITIES.

Since reporting the experiments (published in the October number) demonstrating the permeability of dental tissues; on three different occasions, after thoroughly removing the nerves from teeth, we have washed out the cavities by injecting water through a syringe; dried them perfectly with tissue paper, and then with fine root-pluggers, packed cotton tightly in the pulp chambers, and filled the cavities of decay with wax. Each patient was then dismissed until the following day, when, after wiping the parts about the tooth perfectly dry, napkins were introduced, as if preparing to fill a tooth. The wax and cotton were then removed, and the cavities of decay alone filled carefully with Slayton's preparation. The patients were dismissed again and requested to return in two days. At the expiration of that time the same precautions having been observed with regard to external moisture, the fillings were removed, and on passing a portion of *perfectly white* tissue paper into the pulp cavities, it absorbed a fluid that gave a *rosy tint* to the paper, indicating in the most deciding manner the presence of *serum* there.—*Dental Cosmos.*

Carefully conducted experiments are highly instructive and satisfactory. The one detailed above shows pretty clearly that when a living soft tissue is torn or cut, hemorrhage is likely to follow. It may even take place when a dead part is separated from a living one; and this experiment proves that the dental nerves are not an exception to the rule. It seems also that the serum is discharged from the wound for some time after the flow of red globules ceases. We had inferred as much from experiments less carefully conducted; for example, we noticed that when a cut finger was dressed with a "*perfectly white*" linen rag "it absorbed a fluid that gave a *rosy tint* to it, indicating in the most decided manner the presence of *serum* there."

But the flow of serum will be arrested in process of time; and the arrest may be quickened by the use of appropriate astringents or escharotics. W.

Correspondence.

THOUGHTS FOR DENTISTS.

Louisville, Jefferson Co., Ga., Dec. 15th, 1859.

Messrs. Editors:—It was with such feelings of pleasure that I perused the article in your December number of the "Dental Register," by Dr. Wm. A. Pease, entitled "Thoughts for Dentists," that I could not refrain from exclaiming—

> "Two souls with but a single thought,
> Two hearts that beat as one."

(at least upon the subject contained therein.)

It has ever been to me a galling sore and heart-burn, to see so much envy, strife, rancour and hard feeling existing among my professional brethren, and it was this state of things that caused me, for three years after having commenced my course of study, to waver, as to whether I should permanently enlist in the Dental ranks or not, as I looked upon it as a disgrace to the profession, and to the members individually as gentlemen.

The great "apple of discord" is, as Dr. Pease justly remarks, the spirit of under-charging that exists among us, and permitting our patients to "beat us down" in our fees. This practice of "cheapening" ought never to be allowed, as it does and ever will degrade the dignity of any profession, to say nothing worse of it, and I, for one, have always, and ever will, "turn a deaf ear" to all propositions to "bunch" a jab, a so much-for-the-whole sort of a bargain, just as though they were brow-beating their tailor for a suit of clothes.

I would suggest, if you will permit me, through your columns, that the Dentists of every State have each and severally a Convention, to establish a Professional Fee Bill, and that they be widely published, so that the public may know, without inquiring of individual Dentists, the universal prices, and then every Dentist will have an equal opportunity to sink or swim, as the people will, most assuredly, when they have a settled price to pay, resort to the Dentist who has the best reputation for giving them value received.

Our country (the South,) has most need of some such movement, as there are so many itinerants passing through our midst, and, by the way, not unfrequently *preachers*, to which is occasionally added the *respectable callings* of horse-jockey, black-leg, etc., etc., who not only most grievously deceive the people in "*stuffing*" their teeth, but in by far the greater majority of cases, ruin their dupes' mouths beyond reparation, and thereby cause many to consider Dentistry a humbug. There ought to be a law in every State prohibiting all persons from practicing Dentistry who have neither graduated at a Dental college or are not able to produce a certificate of competency, and having studied at least two years with a Dentist or Dentists in good standing.

It is my fervent desire and greatest aim to do every thing in my humble power to exalt our profession in the eyes of the public, and I trust the profession *generally* will look at things of this nature in the same light as I do, and will put their "shoulders to the wheel," and roll off this stigma from our fair fame, and let us present an untarnished front in the ranks of the professions, let us be "second to none" in honor one to another, and to our patients severally.

Trusting that these few feeble lines may be suggestive of some step, that some abler and older head than mine may undertake, I remain,

Yours respectfully,

Arthur C. Ford.

THE HUMAN TEETH.*

[* This short paper has been prepared in furtherance of the views expressed by the editor of the Register in a previous issue, and is expressly designed for publication in the newspaper press, and therefore, for non-professional readers only.]

" Oh, that I had attended to my teeth before it was too late."

How many times has this, or similar expressions, been uttered, and with what earnestness? You, young farmer or farmer's daughter, how often when in young company, have you avoided a hearty laugh for fear of exposing your decayed teeth or toothless gums; how your pride has been touched, and your pleasures marred from this cause? Now you begin to appreciate the effects of the decay or loss of your teeth, but only in one particular—that of your personal appearance. But let us look farther, and see what evils follow, as decay progresses the utterance is changed; you lose the expression and emphasis, and the full tone of the natural voice; and still more, as you advance in life, your digestion becomes impaired, in consequence of your inability to properly prepare the food for the stomach, and then follows the train of evils attendant on "dyspepsia."

To epitomise,—the decay and subsequent loss of the teeth involves,

1st.—A foul mouth—disagreeable in appearance, and a constant source of annoyance to ourselves and those around us.

2d.—An impaired utterance—the loss of that peculiar quality, the full round ringing tone which is so attractive and the chief beauty and distinguishing trait of the human voice.

3d.—The labor and pain in attempts to masticate the food,—its imperfect preparation for the stomach—the digestive organs overtaxed, resulting in indigestion with a foul stomach and breath, and a host of evils, and lastly, the gradual change in the expression of the mouth terminating in the close proximity of nose and chin.

Now all these evils are the natural result of the neglect and loss of teeth. Would you avoid them? obtain at once professional advice, and you may be in time to have your teeth, though badly decayed, preserved to you for years, perhaps for life; or if your teeth be gone, have others substituted, which, though they can not be as useful as the natural organs, will relieve you to a very great extent from the troubles incident to the loss of your own teeth.

Now let me ask, in contemplating this picture, is there not sufficient inducement held out to avoid its evils? If so, the remedy is at hand, will you apply it? Yours,

Philadelphia, December, 1859. O. U. C.

PHILADELPHIA, Oct. 10, 1859.

MESSRS. EDITORS:—I inflict another desultory letter upon you. There is some instruction to be gained, I think, in watching the progress of the different new materials and methods brought to the notice of the profession.

Gutta Percha plates had quite a short life, and sadly disappointed the expectations of many honest and well meaning practitioners, the writer among the number.

Cheoplasty is still in use among a limited number, but I conclude is rather losing than gaining ground.

Galvanism in extractions seems to be dying out—to be falling into disuse.

All these had their earnest and honest supporters, and why? because of the hope that their was good in them, and from the earnest and sincere desire for improvement and progress.

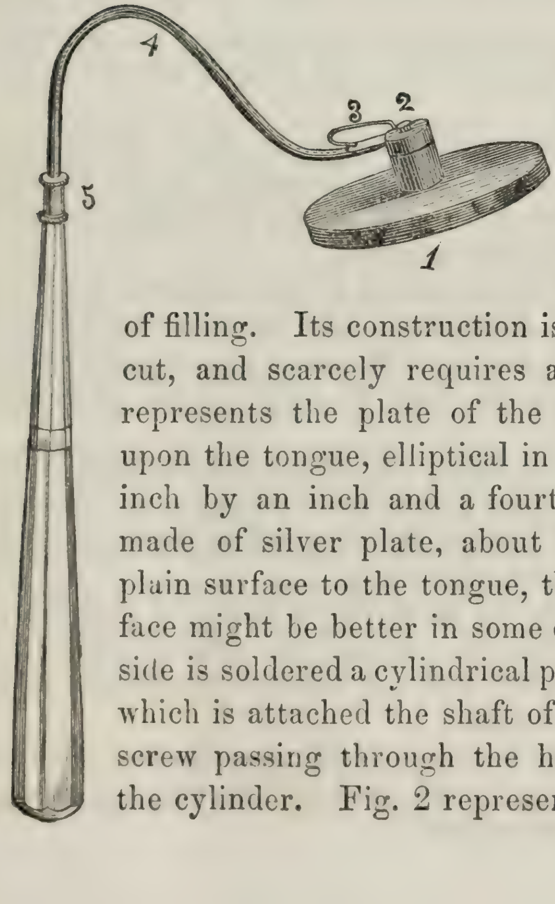
Vulcanite Rubber, under its different titles and combinations, is rapidly coming into favor, and particularly in New York City, and throughout the State is being largely employed. Very intelligent dentists with whom I have conversed, many of whom have been using it for two years, (a pretty good test,) speak very flatteringly of it. The indications, therefore, are very favorable to its general adoption by the profession.

I have been led to say this much from conversations had with expert workmen in the mechanical department of dentistry, in this city and New York, who showed me some beautiful specimens of this work—very light, but remarkably strong, and who assured me that their business was rapidly increasing in this line, and from all they could learn from others and from their own experience, was led to the conviction that it afforded good satisfaction to the wearer, and answered to a great degree, all the purposes of an efficient artificial denture. Speaking of New York, I must tell you that dentistry there is in advance of "all the world and the rest of mankind," as I was assured by a member of the profession whom I met on a recent visit there. But joking aside, (which is not allowable in a high toned dignified Journal) they are an energetic people and all they lack is a spirit of harmony, by which, in an associated capacity, they may the better develop their strength.

What think you of a street dentistry? We have been favored for a brief period with a display of this sort in our city, in imitation of what may be seen in the French metropolis, viz: a person in the public street—on the wide pavement opposite our State House—with a chair and a few forceps and almost a peck of defunct molars and incisors, offering his services to a crowd of curiosity hunters, assuring them that "it don't hurt much, just set down here and I'll show you." Our people were not prepared for such a public exhibition, and want of encouragement, or the police, (I am not sure which,) drove the mountebank to a more suitable employment or another locality. Yours,

O. U. C.

MERRIAM'S TONGUE HOLDER.



The accompanying engraving represents an instrument invented and made by Dr. A. Merriam, for holding the tongue down during the operation of filling. Its construction is well exhibited by the cut, and scarcely requires a description. Fig. 1 represents the plate of the instrument that rests upon the tongue, elliptical in form, its diameter an inch by an inch and a fourth, respectively. It is made of silver plate, about No. 22; it presents a plain surface to the tongue, though a concave surface might be better in some cases. Upon the upper side is soldered a cylindrical peice of silver, to which which is attached the shaft of the instrument, by a screw passing through the head of the shaft into the cylinder. Fig. 2 represents the attachment of the shaft. No. 3 is a spring, acting upon the joint, giving better control of the instrument; by this arrangement, the shaft of the instrument can be moved to either side of the mouth without changing the position of the plate that rests upon the tongue. Fig. 4 is the shaft of the instrument.

Selections.

ADAPTATION OF THE HUMAN EYE TO DISTANCES.

BY CHARLES ARCHER,

Surgeon in the Bengal Army.

The following is a summary of the author's views :—

1. The eye is adapted to varying distances principally by an alteration in the fibrous arrangement of the lens itself. Moreover, that when the lens is removed after an operation this power is nearly lost, and can only be exerted within very confined distances.

2. The purpose of focalizing light at short distances is doubtless assisted, as suggested by Bowman, by the contractions of the ciliary muscle, in its antero-posterior direction, bringing forward the ciliary process.

3. As the posterior hemisphere of the capsule is firmly united to the hyaloid membrane, this portion must always remain quiescent, and therefore the antero-posterior contractions of the ciliary muscle must be very limited as regards the lens.

4. The ciliary muscle being placed around the eye, and its fibres being of a somewhat plexiform character, the contractions of the muscle will relax those yielding portions of the eye placed within its circumference.

5. The relaxations of the ciliary processes will deprive the capsule of its firm support. It will be pressed forward by the lens, which will meet with no further resistance to the expansion of its short axis.

6. The lens itself, as microscopically described by Bowman and Kolliker, is admirably adapted to the varying changes which take place in the capsule.

7. The posterior capsule being firmly united to the hyaloid membrane, the alteration in the diameters of the cavity of the capsule must take place from the periphery of the lens to its centre, and from behind forward, but not from before backwards, on account of the close union of the posterior capsule to the hyaloid membrane.

8. To allow such alterations to take place without endangering the achromatism of the lens, the alterations in the plane of its long diameter must be synchronous with the alterations in the plane of its short diameter. To allow of this, the margin of the lens is free in the canal of Petit; were this not the case, chromatic aberration would result.

9. The elasticity of the capsule of the lens and the ciliary muscle are antagonistic; that on the ciliary muscle becoming relaxed, the capsule of the lens is free to exert that elasticity.

10. By the pressure exerted by the anterior hemisphere of the capsule, by means of the polygonal cells of Virchow, on the anterior face of the lens, the organ is able to fulfil all the requirements for adapting it to receive focalized light from long distances.

11. The polygonal cells of Virchow are placed on the posterior surface of the anterior hemisphere of the capsule with the view before mentioned, and they are arranged with their long diameters in an antero-posterior direction, that pressure may not injure their transparency, which would be the case if placed laterally.

12. These cells are not found in other parts of the capsule.

13. The fibres of the lens are serrated for the purpose of uniting either to the other, so as to allow them freedom of motion without altering their ultimate relations to each other.

14. The ciliary muscle is very highly endowed with nervous matter to supply all these varying requirements.

15. By the above postules, all the modern discoveries in the microscopical anatomy of the eye receive a distinct expression of their individual functions, and by so doing, adapt the organ of vision to the acknowledged laws of light.

CASE OF REMOVAL OF HALF OF THE LOWER JAW.

Read before the Boston Society for Medical Improvement, and communicated for the Boston Medical and Surgical Journal.

BY J. MASON WARREN, M D.

James W., 56 years of age, applied to me in the early part of September, 1859, for a tumor about the size of a hen's egg, occupying the angle and horizontal part of the right side of the lower jaw. The disease had commenced twelve years previously, with a numbness in the jaw, followed by swelling; it went on gradually for two or three years, during which the three posterior teeth were removed. About three years since, the pain became excessive, when an opening was made into it with a lancet, and a discharge of fluid took place, attended with considerable relief.

When he presented himself, the outlines of the jaw had disappeared, and the place was occupied by a smooth, round, shell-like tumor, which extended from the canine tooth backward, rising a little upon the ramus of the jaw. The tumor projected inward, pressing upon the tongue, lifting up the palate, and obstructing about one-third of the aperture of the posterior fauces. The health of the patient was pretty good, and the principal inconvenience given to him by the tumor arose from the obstruction to deglutition, and the affection of the voice; it was also the seat of more or less uneasiness. The disease thus far did not seem to have broken out, and invaded the soft parts.

There appeared therefore, to be no question as to the propriety of its removal by operation; the only doubt was, whether to remove the jaw at the articulation, or saw off the bone just below. As it was doubtful, however, whether the disease might not extend out of sight nearly up to the articulation, as it appeared to do on looking at it from within the mouth, added to the advice given by some distinguished surgeons, that it is always better to remove the bone at the articulation, on account of the remaining portion being dragged forward by the temporal and pterygoid muscles, thus causing much irritation in the flesh, I decided on the following method of procedure, although I should not put much weight in the latter objection, not having found it to hold good in practice, and there being always more or less danger, in disarticulating the bone, of dividing the facial nerve and producing paralysis of the face. I was therefore principally governed by the apparent extent of the disease.

The patient being fully etherized, an incision was made through the skin, commencing just in front of the articulation and half an inch below the zygoma, which was carried in a semi-circular sweep backward round over the tumor, skimming lightly over the facial artery, and terminating upon the chin, about an inch and a half from the lip, opposite the second incisor tooth. The flap was now partially dissected up, and the facial artery cut and tied, in the way I had proposed before the operation. The dissection was then commenced more freely, when the facial artery, which had been lifted near its origin by the tumor, was cut again, although the incisions were not carried any further below than previously. The blood at once spouted out with such force as to completely fill my eyes, and obscure the operation. I mention this fact to show, how the best concerted plan may be frustrated by the anatomical displacement of the parts induced by the growth of tumors in their neighborhood. Although the flow of blood was arrested at once, the patient became quite faint, and was obliged to be placed in the horizontal position for a few moments, which is also worth adverting to, as so rarely occurring in the course of surgical operations where the patient is kept up by the stimulus of the ether, and which probably, previous to its introduction, as often occurred from the exhaustion of the system by pain as from the loss of blood. A tooth being removed, the jaw was partially sawn through with a small saw, and the section completed by the cutting forceps. Hitherto no blood had entered the patient's mouth, notwithstanding the profound state of etherization. The tumor was now dissected away from the tongue and soft palate, and being seized by the left hand was depressed, so as to allow the attachment of the temporal muscle to the coranoid process to be cut away with the scissors. The disarticulation was completed by cutting into the articulation from the inside with a knife, care being taken to keep close to the bone and not wound the internal maxillary artery. The only vessel of any size requiring ligature was the inferior maxillary.

The wound was allowed to drain for two or three hours, when it was closed by six or eight points of suture. The patient had scarcely a bad symptom, and the wound was almost entirely healed at the end of a couple of weeks, when he left town.

On making a section of the tumor with the saw, the jaw was found expanded into a shell, the contents being a soft grey matter.

It may be worth mentioning, that in depressing the jaw for disarticulation, although done with great care, the ramus partly gave way in the tumor, against which occurrence, a caution is given in some work on surgery. The facial nerve, and so far as could be ascertained, the parotid duct, seemed to have escaped the incision, the dissection for the disarticulation of the bone being made, after the tumor was sufficiently free, as far as possible from the inside.

SEPARATING TEETH BY MECHANICAL PRESSURE.

BY J. CANNING ALLEN.

It is well known that the object of this operation is generally to obtain space to fill properly, or for the perfect removal of superficial caries; I shall, therefore, without any further premising, proceed at once to speak of the evils arising from improperly and imprudently separating teeth in this manner.

Forcing teeth apart by mechanical pressure moves them from their original positions and starts them in their sockets. Now, though the simple operatiou of merely moving teeth in their sockets may seem to be of but little consequence, yet, to the observing practitioner, who has so many opportunities of seeing the pernicious effects resulting from this operation when mal-performed, the manner of its proper execution must be a matter of no trifling weight. How often do we hear persons remark, who have had their teeth separated in this way, that they will never have it repeated, giving as a reason that ever since the completion of the operation these organs have been continually getting sore and painful. I am compelled to acknowledge that in many cases this statement of the matter is but too true.

Are these consequences *necessary evils* following this operation? In my humble opinion they are not, but occur only (in the majority of cases) where the work has been injudiciously carried on. I now purpose speaking, with as much brevity as possible, of the different articles used by our profession for separating teeth by mechanical pressure; their respective merits and demerits; finally concluding with a few unobtrusive suggestions upon the best method of progressing with this operation.

The materials in general use for this purpose consist of wood, cotton, india rubber, etc. I object to wood on account of its being a little too active, as well as the inability to apply it in many cases; for instance, in mouths in which the teeth are in immediate contact, pressed and wedged tightly together, it will be found exceedingly tedious and difficult to push a piece of wood between them, as it is very apt to break or crush in attempting to apply your pushing force. Now, as we have substances not possessing these disadvantages, and yet equal to wood in every other respect, I have abandoned its use, (except in some rare cases.) Of cotton, I would say, my experience pronounces it better in most cases than wood; as being softer and more yielding in character, it more readily accommodates itself to the different widths of the spaces, and consequently can be used with more facility. India-rubber, to my mind, is more objectionable than either wood or cotton, the very qualities which recommend it so highly to the use of some dentists forming the ground-work of my objections, viz., its activity and power. It is altogether for my use, too active, too powerful. The advocates of this article may say they can do more in one hour by its use than they can with any other in two; all of this I frankly admit; and, in so doing, frame my argument against it, considering, as I do, that it does the work too quickly, too effectually: in fact it overdoes it—producing such a sudden and violent separation, that the alveolo-dental periosteums take on a grade of inflammation from which in many cases they never completely recover; leaving even in those instances in which the inflammation does subside, an unpleasant chronic irritability. If india-rubber is used at all, it must be with a degree of caution and care that will never repay for the trouble taken.

I now come to speak of what, in my humble opinion, is the very best material that can be used for wedging teeth apart, and that is ordinary tape, varying in thickness to suit the different-sized spaces. This substance possesses advantages over most others, as far as I am capable of judging, and its application for this purpose was first suggested to me by Prof. J. D. White. The superiority of this article consists in its exerting a gradual and even pressure along the whole lateral surfaces of the teeth, on account of its being the same thickness the entire width of the tape; and, again, having a thin, sharp edge, it is much easier to pass it up between the teeth than any thing else I have mentioned, for cotton is very apt to roll and become lumpy when you attempt to force it into a space that is at all tight; while wood if thin enough to slip up between, will crush and break, and if any thicker will not pass up. I therefore honestly believe, taking everything into consideration, that tape is the best thing we can use to accomplish this end.

In conclusion, permit me to say that, whenever teeth are to be separated by pressure, no matter what means may be used to bring about that separation, the entire operation, from the beginning to the end, should be slowly and gradually performed. I consider it infinitely as important as proper filing; for, even when a tooth is so filed as to eventually cause decay, the disease can be stopped and the preservation of the organ secured by the introduction of a solid, well-finished filling; but once lash the alveolo-dental periosteum up to a high stage of inflammation, and you have brought to birth one of the most harassing and stubborn maladies the dentist has to treat. Here mechanical skill and perfection of manipulation availeth naught; there is now no difficult cavity upon which you have merely to exercise your exquisite fingering and superior instrumental performance, to save the tooth, but you have a disease which baffles, and oftentimes defies, the treatment of the most experienced and scientific—a complaint which, after trying your patience for weeks, and nonplussing every description of remedy, finally terminates with the extraction of the offending part.—*Dental Cosmos.*

FINISHING PLATE-WORK.

BY J. L. SUESSEROTT.

Having a consciousness that your Journal, and the one which formerly occupied its place in our literature, has given me many valuable hints—in value more than ten times the amount of subscription price—with your permission, I will give to the profession my method of finishing plates; a method which may possibly be familiar to many of my professional brethren, but one which I am fully persuaded is not generally adopted.

The first step is to procure, and attach to the lathe, a three or four-pronged fork, or a screw such as is used for withdrawing a load from a gun. Upon this a good, smooth cork is fixed, and, with a sharp knife, turned to any desired shape. The cork is then saturated with water as well as it can be, and powdered pumice placed upon it. If we have been careful to remove all excess of solder from our work—which can easily be done by a bur attached to the lathe—we can, with the cork and pumice, make a very smoothe surface, and this can be still more perfectly accomplished by substituting a very finely powdered spar for the pumice, after we have removed the larger scratches with the latter. By continuing the cork for a little while after the above-named powders have been used off, we avoid the use of the Scotch-stone; and finally we dispense with the burnisher, by taking a new cork with a piece of chamois or buckskin stretched upon it, and going over the plate in the same manner as before, with the lathe revolving very rapidly.

A higher color can be given to the plate, by the use of the burnisher after the above proceeding, but we can certainly not produce a smoother surface.

Some precaution is necessary by those who have never used the lathe in finishing plates; in the first place, a careless use of the bur, in removing the excess of solder, might result in the weakening of the piece by removing more than necessary, or, what would be still worse, holes might be eat entirely through the plate. Again, in polishing, if a little care is not taken, the fork or screw, whichever is used, may pass through the cork, and, before the operator is aware, he will have inflicted an injury that will be difficult to repair. A small amount of experience—that which is essential in the proper performance of every nice operation—will enable almost any one, even those, to use a common expression, "whose fingers are all thumbs," to finish their work in about one-eighth of the time that the most expert workman would require for the accomplishment of the same by the old method.

As this is the age of locomotives and telegraphs, I have been induced to think that anything that would save time would be gladly received.—*Dental Cosmos.*

EXPOSED NERVES.

BY G. EZRA M'KOWN.

THE disease indicated in the above caption is one *deserving* the consideration of every practitioner of dentistry; and having been interested by the remarks in the DENTAL COSMOS, between one of your able corps and Prof. Taft, of Cincinnati, not wishing either pro. or con. to enter into the effects of "Nitric Acid" as applied to "recently exposed nerves," but with *your permission*, I wish to lay before the readers of the DENTAL COSMOS the method I have employed for the last three years, and suggested to me by Dr. Amber, of Cleveland, during an operation on my teeth. A case to illustrate. In excavating a cavity in the posterior proximal surface of the left superior lateral incisor, it became evident that the nerve was covered by a very thin lamina of bone, and in excavating to form the proper shape to retain the filling, this part also became loose, and was removed, causing the pulp to bleed *profusely.* Applied a pledget of cotton, saturated with creosote and tannic acid, to arrest the hæmorrhage; retained it from three to five minutes; the pulp was found cauterized and of a whitish color. The cavity was then thoroughly washed with tepid water and camphor, and after being properly dried, a small parcel of cotton, saturated with ol. creosote, was put in contact with the pulp as an *intervening* substance. The cavity of decay was filled with "crystal gold," introduced in such a manner as to protect that part from the *main* or *direct* pressure. Two years and a half have elapsed, and it has never given any trouble, neither has it lost its natural color or vitality. One more case (out of *many* I *could mention.*) October 1, 1857.—Mr. B., aged 24 years, nervous temperament, had a number of teeth filled. The first right superior molar had a large cavity in the anterior proximal surface; dentine sensitive; excavated without wounding the pulp; cauterized with creosote, and filled with "Hill's stopping." July 6, 1859.—The tooth having caused no inconvenience, removed the stopping to insert a more permanent filling; to my surprise, and the gratification of my patient, we found the dentine not only in a normal condition, but the nerve protected by a thick stratum of dentine, resembling crusta petrosa in appearance, but not in structure. To be brief—it was excavated and filled without any inconvenience. The tooth and contiguous parts have continued in a normal condition thus far. Now I do not advocate *this* as anything new, but merely as my *mode* of *practice;* and, taking teeth as they are presented, if the nerves *have* been previously exposed, with no symptoms of periostitis, have had a better percentage of success than by destroying and extirpating the nerve, and filling the *fang*, or by any other method (that has come under my observation) that has been devised.—*Dental Cosmos.*

"FEES FOR PROFESSIONAL SERVICES."

We noticed in "The North American Medico-Chirurgical Review" an excellent editorial on the above, and as it holds forth the views which we have always entertained, we cannot do better than make some reference to it, as the same subject has also engaged the attention of some of our profession; and, again, because considerable fault has been found for the last ten years with us by many in the profession for not rating our charges higher. We never have engaged in the discussion of this subject, nor do we expect to; but to answer all anxious inquirers, we will set forth our views for the purpose of explaining how we have been governed, and how we expect to be, unless the law of the land interpose to direct us, and then, doubtless, we will be found on the right side. We believe with the writer of the article referred to, that the "regular fee-bills, regulating the charges of ordinary practice; a custom which we have always regarded as absurd and unjust, since it places, in this particular, all practitioners, whatever may be their respective merits, upon the same level; whereas every man should be permitted to charge according to his skill and the nature of his services, not forgetting the circumstances of his patients." If patients complain among each other about the difference between the charges of different dentists, it has nothing to do with the subject between dentists. We would not be willing to be governed in our practice by what any dentist should consider a fair equivalent for *his own services*, or what any patient should think was sufficient, whether it was more or less than we, and our patients who preferred us, chose to agree upon. We have always said, when complaint has been made, that if we can not operate for a patient *at all*, and he is obliged to pay another, whom he places confidence in, three times as much, it is none of our business; the patient has no right to cite us as a standard, or bring another down to our charges, no matter how low they are.

If old dentists choose to limit their practice and make high charges, and those whom they have served long and well can afford to employ them at such rates, and who know their services are valuable and successful, and they make that known to their patients before the operations are performed, no one has any cause to complain; nor does any other dentist, young or old, lower the dignity of his profession by operating for a smaller fee. But we do not hold to the doctrine that a dentist who has raised value of his operations in his own estimation, or rates his charges justly above the mass, or his usual rates with which his patients are familiar, has a right to make his claim what he pleases after the operations are finished; a patient has a right to judge whether he can pay an increase of charge or not. We know that there has been a great deal of complaint by patients on this part of the subject, and justly too; and instead of the dentists raising the dignity of the profession by it, they do a great deal to lower it. No one can hope to raise the dignity of his profession by any unreasonable things; but he has a right to bargain for whatever he pleases, providing his patient is a party to the bargain. We have many patients in our practice, some who left their former dentists years ago, on account of high charges, and they pay us more at present than they paid the dentists whom they left.

It is simply impossible for one patient to pay as much as another, the community through, for dental services—and we regard it as a morbid idea for a young man, or even an old one, to be all the time lamenting that he is not receiving as much as another dentist or an older one. We are quite sure that it has never given us any trouble, that older or younger men in the profession receive more for their services than we. We know very well that an intelligent patient of ours paid fifteen dollars to a dentist for plugging a tooth which we had not time to do; while we had never charged more than five dollars for similar operations; and neither of us lost any reputation. The more free the matter of charge is left between the dentist and the community, without the restrictions of fee-bills, the better it will be for all parties. Charges should always be regulated in every dentist's practice according to the community he lives in, so as to be pleasant and agreeable on both sides. If not, the war between them will keep him in trouble all the time. If there is no other and nobler feeling holding together a professional man and his practice than pecuniary interest, it is a very cold and unworthy connection.

We received a letter a short time since from a respectable member of the profession, in our city, on the subject of charges for our operations in plugging, which we did not answer, as we had long since intended to make an article on the subject, which would answer his case—as it was not new to us, and many would be answered instead of one. He remarked that many of his new patients had complained of his charges being higher than ours; that we had operated for their relatives and friends for two dollars a plug; but he had contradicted it—and was he right?—as he wished to charge, although young in the profession, so as not to lower its dignity. We will answer here that he was not right in contradicting it; we doubtless operate for relatives and friends of the patients of many dentists for two dollars, and always expect to do so as long as we have fingers and health to work; we operate for many such, and we do not intend to cut them off. Many of them can not afford to pay more; but, doubtless, many can; but they have struggled upward through life like ourselves, with small means, as patients of ours and as friends, and they shall stay with us so long as God gives us life, if it is their pleasure so to do, no matter what rate of charge we shall make from time to time upon the mass. Nor do we believe that they should be taken as a rule to govern others by—either patients or dentists—nor will we ever interpose between patients and dentists, to regulate their charge. —*Dental Cosmos.*

CASES OF EXTIRPATION OF THE PAROTID GLAND AND OTHER GLANDULAR TUMORS.

BY DANIEL BRAINARD, M. D.,

Professor of Surgery in Rush Medical College, Surgeon of the U. S. Marine Hospital, of the City Hospital, Chicago, etc.

The possibility of removing the whole of the parotid gland by operation is hardly called in question by intelligent surgeons. Indeed, it is, at the present time, difficult to understand how it should have ever given rise to the discussions which have been witnessed on the subject. Might not the possibility of removing the whole of the thyroid body, or of lower jaw, be denied with equal reason.

Allan Burns seems to have been the first to attempt to prove its removal impossible. His reason was that where the gland and all its ducts were fully injected with mercury, it could not be dissected out; the mercury escaping at numerous points. Without having made the experiment, I can easily believe that this is so. But as is remarked by Vidal, the ducts may be opened, yet the gland removed. Besides, the mercurial injection, by filling all the gland, enlarges it, and renders the pressure on the walls of the fissure containing it much greater than in the dead or living subject not injected. Some who were forced to admit the removal of the gland, still contend that it has been done rarely, and deny that most of the cases reported as such refer to the gland at all. Velpeau, in his Operative Surgery, and Beclard, in his thesis, seem to cast doubt upon all those cases in which no great hemorrhage occurred, and in which the face was not paralyzed, or in which the movements of the muscles of the face were restored after having been lost. Yet, in many of the cases whose validity is not disputed, there was little hemorrhage and no ligatures applied; and in his report to the Imperial Academy of Medicine, Oct. 26, 1858, M. Malgaigne admits that "in certain exceptional cases, on account of anomalies shown by dissections, the parotid gland may be completely removed without wounding the external carotid artery or the trunk of the facial nerve." This conclusion was sustained by the Academy. M. Naegale, as quoted by Velpeau, affirms that in the dead subject the gland may be dissected away without wounding the trunk of the nerve, and that he has removed it in the living without causing paralysis.

For myself, I should look with suspicion upon all cases where the external carotid artery is not divided, and those where the face is not paralyzed; but am sure that when the gland is attacked from below, as in McClellan's cases, this artery is often torn across and does not bleed; and I see no reason to doubt that the development of the gland may, in many cases, diminish the size, or even obliterate the artery by pressure, as happened in a case of Heyfelder. It seems certain that the hemorrhage from removing enlarged lymphatic glands is quite as great as that from extirpation of the parotid. I am not prepared to say, in regard to the restoration of the movements of the face, how far this may be due to the action of other nerves with which it is known the muscles of the face are supplied. Mr. Ferguson says that in a case in which he divided the facial nerve, the paralysis became, after a time, much less conspicuous than at first.

The entire removal of the gland has been proved by dissection, for surgeons have unfortunately lost their patients and made post-mortem examinations, as happened to Lisfranc and Beclard. Where the body, angle, ramus and condyle of the jaw have been removed, and the surface of the mastoid process, the glenoid cavity and tubercle of the temporal bone scraped, as performed by me in a case published in the *Amer. Jour. of the Medical Sciences* for Oct., 1853, there is no room for doubt.

I have since repeated this operation twice, and it was once performed by Mr. Hysern, a Spanish surgeon, as quoted by Velpeau.* When the jaw is removed, there can be no difficulty in discerning the tissues in the wound, and detecting any portions of the gland which may remain. But this is not necessary to establish the truth of the reports of the operation. If A. Cooper, Beclard, Larrey, Warren, Mott, McClellan, and the scores of surgeons who, knowing the controversy on the subject, have reported operations of the kind, are not to be credited, it will be difficult to find any reliable authority in surgery. More than this, I believe there is no reasonable ground to doubt that Heister really removed it. Any one who will consult his work, "Institutions de Chirurgie," vol. 3, p. 129, *et. seq.* (1770,) will find that he describes an operation in which a pound of blood is lost during the incisions, in which death often occurred, and that he criticises Gurengeot who had spoken of it as not dangerous. Heister also says that there were surgeons in his day who denied the possibility of removing the gland.

The case of Jane Sharp, as reported by John Bell, could hardly have been less than the entire extirpation of the organ He says, "After the operation, I put my finger into the hollow whence the gland was extracted, which I felt to be two inches and a half deep at its lower angle behind the corner of the jaw bone; the carotid lay bare, beating strongly, not dilated; the upper part of the wound was deep, so that the finger touched the pterygoid process forwards and the apophysis cuneiformis backwards; and when she swallowed. the morsel, in passing down the pharynx, pressed upon the point of the finger.",*

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* Operative Surgery, French edition, vol. 1, Supplementary Appendix. This part is mutilated in the translation by Townsend.

The late Professor George McClellan, who performed this operation eleven times, used to state in his lectures that the operation is much more easily performed on the living than on the dead subject, giving as a reason, that the gland being situated in a triangular fissure, whose base is directly outwardly, any considerable enlargement must cause it to rise out of its bed, and draw with it all those prolongations whose removal in a healthy state would be so difficult.

The same fact was noticed by Dr. Randolph and Dr. N. R. Smith, who even say that it becomes pediculated. My own experience fully confirms the views of Dr. McClellan, without, however, going so far in this respect as that of Dr. Smith.

It were easy for me to quote above fifty operations of what I deem undoubted cases of removal of the parotid gland, of which about one-half have been reported in this country, and this without including any anterior to that of Beclard, but it would be of little interest. I shall, therefore, give a report of two cases in which the gland was removed, together with some others in which operations much more difficult were performed for the removal of diseased lymphatic glands. I reserve three cases, in which the organ in question was removed along with the half of the lower jaw (disarticulated), for a subsequent communication.

Case 1.—*Removal of the Parotid Gland for Scirrhus—Cure.*

Rebecca Dearsdorff, aged thirty years, of full habit and good health, consulted me, January 30, 1857, on account of a tumor situated between the ramus of the jaw and the lobe of the ear. The attention of the patient was first directed to this tumor four years previously, when only a slight enlargement existed. From that time it increased slowly and without any pain until within three months, when it has grown rapidly. The tumor at this time is firm to the touch and presents some inequalities; the skin over it is not discolored.

Operation.—The patient having been placed under the influence of chloroform, a semi-circular incision was made, commencing behind the lobe of the ear, ending upon the middle of the cheek, and passing over the lower part of the gland. The covering having been dissected up from below, the finger was thrust beneath the tumor, by which, with an occasional touch with the knife, it was readily separated from its attachments.

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* Principles of Surgery, p. 507.

A circumstance especially deserving of notice is, that *the fissure in which the gland is naturally situated was nearly empty, and the finger passed into it without difficulty.*

During the operation, the portio dura was divided; the external carotid artery was torn across, and the end of it lay in the lower part of the wound, three fourths of an inch in length, where it had been drawn out of the tumor. It did not bleed, but, as a precaution, it was tied. The face was instantly drawn to the opposite side on the division of the nerve.

On examination of the cavity, the ramus of the jaw, the mastoid process, the styloid process in its whole length, the stylo-maxillary ligament, the auditory passage, and the ligament of the temporo-maxillary articulation, were fully exposed. At the bottom, the internal carotid artery and the internal jugular vein were distinctly seen and felt. There was no great hemorrhage. The wound was filled with a sponge until this had entirely ceased, when careful search was made by the surgeons and assistants for any remains of the parotid gland. None could be found; all the spaces into which it is said to prolong itself were vacant. The wound was dressed in the usual way, and a full dose of morphine administered.

On examining the tumor, the structure of a salivary gland was distinctly to be discerned on its entire surface. The trunk of the portio dura passed through it. The central part seemed to me very decidedly scirrhus.

The operation did not occupy ten minutes, and was by no means very difficult. The reason is that during its growth the disease had gradually raised the gland from its bed in a manner which will be readily understood. The patient recovered, and was able to return home in two weeks.—*Chicago Medical Journal.*

Editorial.

WARRANTING DENTAL OPERATIONS.

The custom has obtained with a great majority of the members of the dental profession of giving an unlimited guarantee for the permanence of their operations, particularly those upon the natural teeth. Now while we consider it the duty of every operator upon the teeth, to perform all operations in as perfect manner as possible and to embrace every advantage that offers from the perfection of the work; yet we do unhesitatingly condemn the wholesale method of warranting all operations, employed by many. It is not required by the intelligent patient who has confidence in the operator; and no one should employ an operator if he has not full confidence in his ability.

There are many circumstances that we can not anticipate or control, which may affect the permanency of an operation, however well executed it may be; and for these no dentist can in justice to himself become responsible, and no one who has a just appreciation of the subject, and desires to be just to himself and his patient, will do it.

In the great majority of cases no one can fill teeth, with an absolute assurance that their preservation will be permanent in the full sense of that term; and he who gives an unlimited guarantee for the permanency of his work is either at fault in the matter, or ignorant. The proper course in all operations is to perform the work as well as possible; at the same time giving the patient, if need be, a full explanation of the circumstances, that may modify the permanence of the work, and of the difficulties attending the operation, and of the probable efficiency of the work; permitting the statement in no instance to exceed the probabilities of the case; under such circumstances if a filling is lost, no honest patient would demand the tooth refilled without charge.

When we have filled a tooth well, or as well as we can under the circumstances, and the filling gives way, and the patient desires it refilled, we do it, if we think there is a prospect of success, and charge the ordinary fee for it. If the surgeon amputates a limb and the patient dies, he collects his fee, and justly too. If the physician treats his patient and cures him, and he is sick again in a week and he treats him again, he collects both bills, even though the patient should die. If it is worth five dollars to fill a tooth once, it is worth five dollars to fill another just like it, or to fill the same one again; and there is no reason why the one should be done without a fee sooner than the other.

The question is often asked, "Dr., do you insure your plugs?" The invariable reply should be, "I do not, for if I make you a good operation, there is scarcely any comparison between the fee and the value of the operation to you, even if you are thereby enabled to retain a valuable tooth for a few years only."

Insurance upon dental operations is injustice to the patient as well as to the dentist. Nine-tenths of the patients who require and receive a guarantee upon their operations will manifest a total disregard for the cleanliness, and well-being of the teeth. They think their teeth are all "*fixed*," and "*insured*," and so they are safe without any further care on their part. But after a time the fillings give way and the teeth are lost, and the anathemas are heaped upon the head of the poor dentist, who was so unfortunate as to get into a false position.

The admitted necessity for a guarantee is a confession that the work is not well done. But the patient is quieted by the assurance that when this gives way, he will receive another of the same kind without charge. "Sweet consolation." This whole matter of dentists insuring their operations, is injustice to both the dentist and patient, and an imposition upon the profession. T.

DECLARATION OF INDEPENDENCE.

"When in the course of human events—" Hold! We don't mean *the* declaration, but *a* declaration, as follows:

"It is the design of the editorial corps to make it a thoroughly independent, professional Quarterly Review. In order to do this it will be conducted as experience has shown it best to conduct such publications.

"That these, gentlemen editors, occupy an independent position, it is enough to say that they have no merchandise to dispose of, no books to introduce to the profession, no tickets to sell. And that they may not be open to the suspicion that this work may be made to accrue through outside influence or reputation, to the benefit of their practice, they prefer that their names do not appear."

The above is from the prospectus for the third volume of the "American Dental Review." We are glad that Dr. Leslie is to be somewhat relieved in his labors ; but, we are at a loss to know what call there was for some of the statements of this declaration. For example, " It is the design of the editorial corps to *make* it a thoroughly independent Quarterly Review." Has it not been " thoroughly independent" under the exclusive management of its publisher and late editor ? It would appear not, for otherwise, it would be announced that it is the design to *continue* it as a thoroughly independent Review.

To enable the "gentleman editors" to be independent, " they have no merchandise to dispose of, no books to introduce to the profession, no tickets to sell." Ah ! that explains it ! The reason that it is now necessary to *make* the " Review" independent is that its late editor had merchandise to dispose of," " books (of foil) to introduce to the profession," and once had " tickets to sell," consequently he did not "occupy an independent position." Are we to understand the publisher that these "gentlemen editors" could not be independent if they had merchandise to dispose of, books to introduce, or tickets to sell ? If so it is well that they are free from these incumbrances ; for stumbling blocks should be kept out of the way of the weak. But if the publisher of the " Register" ever pays its editors such a left-handed compliment, one of them will, most likely, resign.

But these " gentlemen editors " are to be not only independent, but above, or at least " not open" to suspicion, hence, " they prefer that their names do not appear." All right, certainly, but when John Hancock made a declaration of *independence* he put his name to it. But these gentlemen seem fearful, on account of their great ability, perhaps, that their editorial reputation " may be made to accrue to the benefit of their practice." This would be sad indeed, but as they "occupy an independent position," they would, probably, survive the catastrophe, and live to realize that the chastening was for their good. Their position seems to be really independent in one respect ; if their editorial labors prove a failure, they can hold quiet and their practice will not likely suffer ; but if they prove a success, they can tell some friend, as a profound secret, that they are the "gentlemen editors," and poor mystery-loving humanity will be all agog.

We thought the "Review" was "thoroughly independent" before, but, if the publisher thinks differently, we have no disposition to quarrel with him. It is a mere matter of opinion, and the profession will believe the one most likely to be in posession of all the facts. But we differ with the publisher about the character of his editors, and here we are not so ready to yield the point. We believe they would be independent, even if they had "tickets to sell." If they would not, independence has nothing to hope for from them. Fluid mercury might be forced into a central cavity of an upper molar, with a hair broach, or cambric needle ; but, by no contrivance can independence be forced into a man who cannot manifest it over his own signature, in spite of such paltry considerations as the publisher refers to. W.

The American Dental Review suggests carbolic acid as a good application where a "wound is slow to heal." The prescription is a good one in many cases, but by no means new. It might be conveniently applied with the "serrated petugar," mentioned in page 160 of the November number of the "Review." W.

VULCANIZED RUBBER.

This material is being extensively introduced as a base for artificial dentures. In this city most of our dentists have taken hold of it and for the most part thus far seem to be well pleased with it, and all who have become adept in working it, are very much pleased with it in many respects. Of its valuable points we have spoken heretofore, and need not now repeat them. We now only wish to refer to a few things which progress seems to demand. The proper method of putting up the work is better understood than it was for sometime after its introduction ; there is more care and delicate manipulation employed than at first. Operators are becoming more familiar with the nature of the material, and the mode of using it.

From the limited experience which we have had with it, and from observation upon the mode in which the work is ordinarily done, we are convinced that more care is required to secure, or rather insure successful results than is usually given to it.

All new processes have to run the gauntlet of hasty, careless and unenlightened manipulation. This is an ordeal for which, those who introduce them are responsible. It is a strong inducement, with a majority of operators, to adopt a new process if it is easily and rapidly accomplished ; and usually the first attempts are most rapid, owing to an ardent desire to see a *result.*

The vulcanite base is just going through this ordeal, at least in the west, and it will be sometime before it will have recovered from that influence.

Real improvement is all the time being made by those most skillful and careful in its construction. The appliances and instruments are constantly being improved in efficiency and convenience, as well as being made cheaper. This is especially the case with the vulcanizing apparatus ; two years ago the apparatus cost about one hundred dollars. Then it was a large inconvenient affair requiring a good sized room for its accommodation. Now it is reduced to one-fifth that price, and nearly as much in size ; is a small, neat affair, that will be ornamental in an operating room ; and requires very little attention for its perfect control. With the improved apparatus, and the additional care that is being exercised in constructing it, we hope ere long to see the defects that have hitherto characterized it obliterated. The points in this work where defects have been most apparent are the arrangement and antagonism of the teeth, and the finish. The first of these requires great care to obtain proper results. As much care is required in the first arrangement as in any other method, and more care is required to keep them in proper position during the process than in any other style of work. Quite as much care and labor is required to give a fine finish to rubber work as any other, and patient labor is well rewarded too. This work will soon be in very general use. T.

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Original Essays and Communications.

THE PHYSIOLOGY AND PATHOLOGY OF THE MOUTH.—THE GLANDS AND THEIR SECRETIONS.

The *glands* within and about the mouth are very numerous, and the amount of fluid which they pour out into that cavity is very great—far more than passes into the blood from food or drink, rapid as is endosmotic absorption in this part of the system; and hence a considerable quantity passes down the throat, both with our food and at other times. The amount of fluid poured into the mouth by the glands, more than is re-absorbed while in the mouth, has been estimated by Bidder and Schmidt, of Derpt, as detailed in their great work *on the Digestive Juices*, at from three to four pounds, avoirdupois, of saliva in the twenty-four hours.

The quantity of saliva poured out varies greatly in amount at different times and under different circumstances. Not only is its quantity changed in accordance with the nature of the food eaten, but also in accordance with the mental impressions. But very little is secreted during sleep, but the thought of food will frequently fill the mouth to overflowing almost instantly. Dentists are well aware that if they can get the attention of their patients, they can sometimes perform operations with but little interruption from the saliva, and yet when once it commences to flow, it will do so abundantly for a considerable time.

As has been intimated, the nature of the food also has considerable influence upon the quantity of saliva secreted; hard, dry foods leading to a much greater flow than is caused by those which are soft and moist. There are several articles which are used as condiments, or seasoning, with food, which also appear to be direct stimulants to the glands that secrete saliva and water into the mouth. It is well known that black, but more especially red pepper, produces this effect in a marked degree. So also, probably, does salt, and it also causes free exosmosis of the fluid portion of the blood out through the buccal mucous membrane. The movement of the jaws, likewise, as in speaking or chewing, increases the amount of this secretion, and frequently hunters and others who are suffering some inconvenience from thirst, chew a piece of stick or a small coin, in order that its mechanical impressions, and the movement of the jaws and the muscles it causes, should lead to an increase of the moisture within the mouth. The usual manipulations of the dentist have been observed to increase the flow of these fluids at least to ten-fold their ordinary amount, but the excitement continues but a short time.

The *salivan* glands are not the only glands whose secretions are poured into the buccal cavity. The entire mucous lining of the mouth may be considered as a secreting glandular surface, for *all* secreting glands are but, as it were, an enfoldment of a secreting surface crumpled up into a small compass, as a sheet of paper may be enfolded and crumpled up in the hand so as to be made to assume a globular form.

In the remarks that have been made respecting the *Epethelium*, it has been considered simply as a covering to the mucous membrane. So also in regard to *osmosis*, the blood-vessels and their contents were mainly considered, and with reference, principally, to the osmotic flow of fluids into the blood-vessels from that taken into the mouth as food or drink. It is proper now to consider the mucous membrane with reference to its peculiar secretion.

The word *Mucus* conveys to the reader, generally, but a vague idea. It is a vague term. We are led, usually, to suppose that a technical term of Latin origin has a distinct and definite meaning, but no very definite meaning is usually attached to this word. Perhaps the word *slime* would have been preferable, as that would imply only the one quality of a glassy, semi-jelly-like fluid, easily drawn into strings or threads, powerfully coherent, and very tenacious in its attachment to any surface it is in contact with.

The chemist can not tell us whether pure mucus is acid or otherwise—or whether the soda often found with it is a necessary part of it, and it is therefore alkaline. The microscopist describes some variously shaped bodies he observes through his lenses, and calls them "mucus globules," but these bodies occur in greatly varying proportionate quantities, sometimes one form or size, constituting the greater proportion of the solid matter within the fluid we call mucus, and sometimes another form or size being in similar excess, and yet apparently having but a little if any influence on the nature of the fluid.

It is quite evident, however, that some of these bodies observed through the microscope, are detached epithelial scales, only differing from each other in accordance to the usual variation in form to be found in epithelial scales from different portions of the mucous membrane. Other of the so-called "mucus globules" appear to be simply epithelial scales not fully perfected before they have become detached—youthful epithelial scales—such as are always to be seen in the deeper parts of the mucous membrane, being nearly round balls or beads of jelly, with one jelly bead for a center or nucleus, which is quite large and with distinct outlines, and that surrounded with several other similar bodies. These two forms of bodies—the apparently dead old epithelial scales, and the youthful ones—are so constantly present in mucus, and in such large quantities as to be supposed by some to be *the* mucus; and the water present is considered simply as water in which the mucus is suspended, or which the mucus has absorbed.

The slightest irritation, and of a strictly healthy character, increases vastly, not only the amount of water in the mouth, but also of the salts that water holds in solution, as well of the other matters in the water. Many have supposed that the epithelial scales were the mucus, and that they absorbed the water as trajacunth does, and thus became the glassy, jelly-like semi-solid known by that name; while others supposed the fluid was mucus, before the epithelial scales were combined with it, and that they should be considered as accidental, or at least foreign bodies, and not a part of the mucus, *per se.* Dr. Tilamis, Prof. Rokistanki, Virchow, and other eminent physiologists, have inclined to the opinion that the peculiar characteristics of mucus, or that which makes it mucus, is the old and the young epithelial scales and globules become detached and filled to saturation with water.

But from whatever source it comes, mucus is a glassy, half-jelly like fluid, transparent, easily drawn out, tough, adherent; that it is capable of absorbing a vast amount of water which swells it up—but is not capable of being dissolved in it, for mucus is proved to be entirely insoluble and only sparingly diffusible in water. Its toughness and stringiness is in proportion to the amount of "mucus globules" in it if not produced by them.

The mucus of the mouth, as well as in other parts of the system, is formed by both the free mucous surface, and also by special mucous glands. When formed by special glands, it is usually mixed with *solvents* designed to dissolve foods, and which are to be considered hereafter. The mucus thrown off from the free surface, does not appear to be mixed with solvents.

As mucus is but slightly diffusible in water, it is not washed away in the fluids of the mouth; but is spread over the surface from which it is secreted, and adheres to it with considerable tenacity, and there acts on many substances, chemically, in a way that fits them to be readily absorbed through the membrane, while its tenacity of adhesion, to the membrane, its slipperiness and elasticity seem to make it a most admirable shielder to the epithelium against the mechanical or chemical injuries that delicate pavement is liable to.

As the mucus absorbs a large amount of water, it serves to keep the membrane *moist*, which is an essential pre-requisite to osmosis, in both directions. Without being moist, the membrane would lose nearly all its functional uses—and mucus is the great cause of its constant moisture.

The Saliva, as a fluid, almost constantly present in the mouth, has always attracted a considerable share of the attention of the physiologist, but until quite recently no one appeared, even approximately, to determine its quantity, and were not quite decided as to its uses. But Drs. Bidder and Schmidt have carefully guarded against errors in their numerous experiments and have concluded that about three pounds is the amount secreted in man in twenty-four hours.

The amount of saliva excreted in a given time varies with the state of the mind, and the nature of the food taken. It is also greatly affected by the use of stimulants, which act to increase the flow for a considerable period of time after they are withdrawn. The *quality* of the saliva seems to be but little, if any affected, even when it is greatly changed in amount. But the different salivary glands secrete a very different amount of *water*, or saliva of differing degrees of dilution. Bernard, Bidder and Schmidt, and others have always found the fluid secreted by the parotid glands so very *watery*, or so little of other matter besides water, that they have come to the conclusion that they are truly *glandes aquipares*, and not true salivary glands. Mr. Jacrebowitsch found only 4-7 parts of solid matter to 1000 parts of the excretion of the parotid glands; but the fluid secreted from all the glands and the mucous surface of the mouth contained 10-37 parts of solid matter to the 1000 parts of fluids.

As there has been experienced great diffculty in determining the amount of saliva secreted, so also has there been great difficulty in determining its chemical character.

Sulpho-cyanide of potassium has been long known to exist in the saliva, and it is found in abundance in proportion to the vigor and healthful activity of the individual secreting it. Yet its use remains to this day utterly undetermined. Dr. Kletzinsky suggests that it is to prevent the mouth from becoming mouldy! It does not, as far as can be ascertained, promote digestion, or any other change in the food.

In nearly all works on physiology there are tables of chemical analysis, showing the different chemical bodies that enter into the composition of the saliva, but however valuable they may be in determining the chemical and electrical actions and reactions which will follow the introduction of the various metals and alloys into the mouth, by the dentist, they do not seem in the least degree important in determining the physiological action and uses of saliva, for those physiological actions do not appear to be modified in the slightest degree by the amount, or presence, or absence of any one ingredient. Hence, physiologically considered, the saliva, may be spoken of, simply as a *fluid*, as milk, may be spoken of as a fluid.

In regard to the *Dental Chemistry of the Mouth*, nothing need now be said, as that matter has been ably and fully presented through the colums of the *Register*, by Prof. Watt.

The saliva possesses the power of forming sugar out of amylaceous, or starchy food. This is not a newly discovered power of saliva, but the recent experiments in the Derpt laboratory have fully established the fact, that had come to be doubted by some. This conversion of starch into sugar appears to commence *instantaneously* on the union of saliva and a decoction of starch, whether the mixture takes place in the mouth or in a glass vessel, and hence is a purely chemical change. The pancreatic and intestinal juices, possess this power of conversion also, in common with the saliva; unboiled or *raw* starch is not thus changed.

Neither the secretions of the parotid glands, the sub-maxillary and sublinguial glands, or the buccal mucous membrane, when taken separately possess this power of converting starch into sugur *and only an admixture of them*, will produce a change—or at least an admixture of the buccal mucus with fluid from the sub-maxillary glands. The parotid fluid seems to be simply water. When the saliva is considerably acid, as from disease, the starch is not changed into sugar as quickly, and yet it is changed after a time.

The present state of our knowledge in regard to changes produced by the saliva on the food, indicates that boiled or cooked starchy food, is in part at least changed by the saliva into sugar; that a part of this sugar may be at once absorbed from the mouth into the system, and a larger portion passes into the stomach, there to be changed into lactic acid. The other part of the starch, not changed into sugar in the mouth, may be exchanged by contact with the pancreatic and intestinal juices, for they possess the same power as the saliva.

The saliva is not known to produce any other metamorphosis than that of changing starch in sugar; but it does *retard* the digestion of meats, and animal food or albumen, and hence such foods are not usually retained long in the mouth, or much mixed with saliva. Quite young infants do not secrete any saliva.

As saliva has for its source many parts of the mouth, an injury to any one part of it is not likely to seriously modify its amount. These glands also have great power of accommodating themselves to quite considerable changes of circumstances, and hence it is that the disgusting habit of spitting indulged in by some, does not appear to produce serious suffering to those who *do not* expectorate as gentlemen, however much others may be made to suffer by it. Others do suffer from a loss of appetite, and a feeling of distress at the epigastrium. Those who use tobacco, doubtless suffer less from the loss of saliva than they would from swallowing the poisonous juice of the weed.

When the tongue, lips, and mucous membrane become dry and parched, and the teeth covered with a thick sordes, as in some forms of fever, starchy food is highly improper, for then there is not enough starch secreted to change the saliva into sugar, and it therefore can not be changed into a soluble substance to be absorbed into the system. Then beef-tea, broths, and soups, will be beneficial, and almost always agreeable to the palate.

ANOTHER SCREW LOOSE.

In the January number of the *American Journal*, we have another Jeremiad from the pen of him who recently sang a tearless requiem over the departed glory of our " Dental Periodical Literature." Now he is disconsolate over the failure of dental societies. And here he can not even comfort himself by a reference to the past, as he did in regard to dental periodicals; for dental societies, he maintains, have always "been marked by failure." So decided does he consider the failure, that he is almost ready to call the whole movement a " contemptible effort."

This writer proposes, in the outset, to survey " the work done by those National Dental Societies which have from time to time, been ushered into an ephemeral existence;" and, had he confined himself to this, we would have rested content. But when he calls the work done by the two national associations a *failure*, or a *contemptible effort*, and at the same time claims they have done all that has been accomplished, he does injustice to other societies. Of the local societies he says—" but of true scientific fruit they produced nothing. The parent tree bore all that was to be gathered." The parent tree, here mentioned, is the same national society whose course from the beginning "has been marked by failure;" but now we are told, not that it bore all the fruit that *was* gathered, but "all that *was to be gathered.*" Is a tree that monopolizes all the fruit of the orchard, bears all that is to be gathered, a failure?

But have the local societies produced no fruit? The writer, under consideration has "been able to discover two circumstances which reflect credit upon the national societies; and the prominent one of these "relates to the pecuniary assistance extended to a periodical." But, by "rigid search," he would have been reminded that one of the local societies started and sustained a periodical till it became self-sustaining. Every dentist knows that the "Mississippi Valley Association" is the parent of the *Dental Register*. But the same society bore other fruits. Among these may be enumerated cylinder or block fillings, continuous gum work, the swaged socket rim in plate work, the warm air blow-pipe, the best, and generally adopted method of using crystal gold, the most simple and convenient non-explosive spirit-lamp, the improved sherwood forceps (which leave every thing else out of sight behind); Talbert's drill excavators, and the use of definite retaining points, (now in general use,) *adhesive foil* (by Dr. Leslie), the separable screw for extracting fangs (more convenient and better than the screw forceps), the *rational* use of creosote, chloride of zinc, nitrate of silver, and other agents applied to the teeth, a popular essay, which has gone through four editions, besides hosts of other things which we could mention by referring to documents. These we have penned as we thought of them, without any effort at arrangement or classification of them.

Another local society erected the first building, and the only one the world ever saw expressly built for the purpose of dental instruction; and no building in the world is better adapted to the purpose for which it was designed. And much might be said of the honorable and useful efforts of other local societies; but we must refrain. The above will show how little credit is to be given to such sweeping assertions as this writer seems fond of.

It is not uncommon for men to become misanthropic and morose; and when they do so they conclude that all is wrong. Examples are numerous in the church, in the state and in the profession. If the disaffected member of our profession is an old man, he gravely concludes and mournfully maintains that the profession is going backward in manners, in morals and in science, when perhaps the whole difficulty is that he has lost his way, has been disappointed, and, in his confusion, has taken the back track himself, and seeing no others going the same way, concludes that all have forsaken the cause; and proved recreant to their trust. If he is a young man, he concludes that all who do not believe his vague theories and respect his whims, are false to the profession and hostile to himself. He imagines that he is almost a martyr, that he is persecuted for opinion's sake, that whenever he speaks others are for war, that they even wish to deprive him of that lawful inheritance, the correct use of his mother tongue; and he sincerely believes that the only hope of the profession lies deep down in the recesses of his mind. Accordingly, he rebukes young men for their opinions, tells old men *his experience*, and admonishes all that it is a very serious thing to differ with him in judgment.

Such we believe to be a fair description of the old croaker, and the young croaker. We have no sympathy with croakers in any department of society. They are all impracticable and useless. The pious croaker laments that religion is perishing from the earth, though God's faithfulness is pledged to sustain it. The political croaker cries "the Union is in danger," though it is ten times stronger than when consumated. The dental croaker laments that our profession is doing nothing—is even retrograding, while its progress eclipses that of any other profession in the world. And the writer of the article under consideration mourns over the failure of dental societies, and regards their proceedings as "*lamentably* invaluable," while, in truth, they have done more to accomplish the ends for which they were organized than any other associations of the same period. The jaundiced man concludes that every thing is yellow but himself; and the drunken man thinks that even the lamp post is staggering from the effects of strong drink.

Even the arithmetic of our friend in the *Journal*, seems to be subjected to the same kind of perversion, giving evidence that he labors to some extent under a mathematical halucination. For example, in speaking of the number of essays read at the early meetings of the "American Society," he says: "The gradual diminution in the number appointed and *read continued*." Now let us examine this gradual *diminution*, which preceded the meeting he refers to. At the first meeting after the organization, according to his showing, "not one was read." By the next meeting they had *gradually diminished up to three*, and by the next, to "three or *four*." This is a small affair, but we mention it to show how ludicrous men make themselves, when determined to complain, while they have nothing to complain of.

Of the two national societies this writer tells us that "their sole result has been to show that the right course is directly opposite to the one heretofore followed." But it is plain that the two societies under consideration followed different courses—as nearly opposite as could well be conceived. To which one of these is the right course directly opposite? Or perhaps *direct* opposition would preclude all association whatever. If so, a great many are following the right course.

But the old society having reached "its full vigor," we are told that it "began rapidly to decline," and that it "tottered through two or three years of *puerility* and died." Reached its full vigor and failed into *boyhood*. How many would be happy to fail in the same direction!

To sum up the views of the writer in regard to the various meetings of the "American Convention," we might say that he considers the first "unhealthy," the second entitled to "all due praise," the third "a feeble imitation" of the second, the fourth "without any feature of interest whatever," and the fifth, as "noticeable for the good opinion some of the members appeared to entertain of it.

Why the second meeting was so good, and the fourth "without any feature of interest," the reader may be at a loss to determine. It is probable that the writer of the article under consideration was at the second meeting but was absent from the fourth. Had he been present, we think he would have succeeded in making the fourth almost as interesting as the second.

But for all the evils of past and present associations, the writer suggests a remedy. Assuming that the great evil has been "freedom of access," he directs his remedy against this. He tells us that "it is certain that our chief evil may be greatly mitigated by the money test. There can be no doubt that considerable fees will keep out a large class of persons who are not of the least use, and who, under the present order of things, are exceedingly troublesome."

This money test might do pretty well in practice, if the unworthy were too poor or too penurious to pay "considerable fees," and if, on the other hand, the worthy were all able and willing to comply with such exactions. But the writer himself admits that his "money test" will not reach a "much to be dreaded" class, who "are willing to make large outlays in the gratification of vanity, who *must* be known as participants in every movement." "The five or ten minutes rule is the only check" he can think of to meet their case. That is, to keep the fools who *buy* their way in from *boring* him, he will allow the wise to say little or nothing. Enough said. W.

DIFFICULT DENTITION.

BY N. S. BANCROFT.

Read before the Michigan Dental Association, of Detroit, Jan. 10th, 1860.

On the subject of Difficult Dentition: I suppose, if parents were absolutely healthy, there would be but little trouble with the children in dentition. Let the child be properly begotten and fed—let the habits of both mother and child be correct, and dentition will go on without serious trouble. Hence the treatment should begin with the mother, long before the birth of the child, and be continued after, and then, if the child does suffer, whatever else we do, let us not poison it.

The principal danger to be apprehended, is from a confined state of the bowels: so I would have the child fed, (or the mother, in case the child derives its food exclusively from her,) in such a manner as to keep the bowels free, and there is no danger.

If the child manifests febrile symptoms, I would bathe it. "Cold water, doctor," do you say? No, I would use no cold water, except ice to the gums, if they be much inflamed. Inclose a small bit of ice in "a rag" and put in the mouth a "sugar teat" without the sugar.

I am aware that the doctrine above announced in regard to the state of the bowels is not according to the books or general notions; yet I apprehend the principal danger in a relaxed state of the alvine functions, consists in the treatment usually instituted for it. With my experience and observation in these cases, I rely entirely on diet and bathing, as the only safe treatment.

On arresting decay in teeth. Allow me to call your attention to a new compound, (amalgam) which Dr. Douglass is using for plugs. I have had opportunities of examining some of these plugs after they have been inserted some time—they do not appear to tarnish easily, and are very hard, and of course make a good masticating surface. It seems a pity that a plugging material, whose merits in some respects are superior to gold, should be limited to secret practice, when humanity is suffering for the want of just such a boon—and particularly Dentists, are obliged to work away with gold, when it would be so easy, if they only knew this other. Pity it is not patented, so we could buy it.

A CASE OF OSSIOUS TUMOR WITH A TOOTH IMBEDDED IN THE PART.

BY M. H. ANDREWS, M. D.

Miss Bachellor, æt 16, about two years since observed a small, hard tumor, on the right side of the lower jaw, opposite the second bicuspid. It was without pain, hard to the touch, and firmly attached to the bone. It grew slowly for the first year, but about the first of November, 1858, it commenced extending along the jaw in both directions. From that time it grew fast until the 20th of June last. I cut down on the inside of the cheek and cut off the tumor smooth with the jaw, cutting away all the diseased structure that I could get at without removing the teeth which were not at this time disturbed. The outer portion of the tumor was a smooth hard shell of bone, seemingly an expansion of the jaw and alveolus, the inner portion soft gelatinous, or fatty, with small scales of bony matter diffused through the whole. The wound healed kindly and for about six weeks seemed to be doing well, but it soon showed that it was growing again, which it continued to do until the 13th of December, when assisted by Dr. J. Mansfield, of Niles, the tumor was again removed. It did not extend as far back on the jaw as before, but was developed forward nearly to the chin. This time all the teeth were extracted, the diseased portion removed as far as possible, and the surfaces cauterized with a hot iron.

On extracting the teeth the first bicuspid was found wanting, but on cutting out the diseased portion that extended under the teeth, the tooth was lying horizontally in the jaw with the crown towards the angle, the fang pointing forward; it occupied a position nearly under the molar teeth. It is now four weeks since the last operation, and there is no appearance of an unhealthy growth. It is healing kindly and everything seems to be doing well. The general health of the patient is good, seldom having any sick turns; has a good appetite and every way seems well.

The question arises, was the tooth the cause of the tumor, or a simple accidental circumstance.

Proceedings of Societies.

INDIANAPOLIS, Jan. 3d, 1860, 2 o'clock, P. M.
Room of State Board of Agriculture, Capitol.

The Indiana State Dental Association met pursuant to adjournment: President, Dr. John F. Johnston, of Indianapolis, in the chair, and Dr. A. M. Moore, of Lafayette, Secretary, *pro tem.*

The members present were: Drs. T. M. Nichols, and P. G. C. Hunt, Indianapolis; Drs. John Hood, G. Lupton, H. Satterwaith, L. W. French, and J. B. Harland, Greensburg; C. C. Dills, Peru; S. B. Smith, Terre Haute; G. H. Perine, N. Y.; J. T. Toland, Cincinnati; J. P. Ulrey, Rising Sun.

The minutes of the first annual session, held December, 1858, were read and approved.

Dr. Nichols made a report as Treasurer of the Association, which was accepted.

Dr. Johnston presented the following Report, to wit:—

"Indianapolis, January 3d, 1860.

To the members of the Indiana State Dental Association.

"Gentlemen:—Having been requested by the committee representing the Pennsylvania Dental Association to call a special meeting of this society for the purpose of electing delegates to attend a preliminary meeting of delegates from other associations and colleges, to be held at Niagara Falls in August last, to advise as to the establishing of a national association on a representative basis—and the President not having the power to call a special meeting for such a purpose—and further, not deeming it advisable or necessary to do so if he had, concluded, however, as the matter seemed important, and was deemed especially so by other societies, to write each member of the Association for their views relative to the matter, requesting them, if favorable to the delegate system to write the Secretary of this Society the names of those whom they would prefer to represent us. We being entitled, according to the rule adopted by others, to three representatives, that being one to every five members. All except two responded favorably, and the following is the result of the vote as exhibited to me by the Secretary's report which I herewith hand to the society. * * *

* * * "Drs. Moore, Ulrey and Johnston having the majorities, certificates were made out and sent to them. Dr. Ulrey not being present at Niagara, I appointed Dr. Hunt to act for him, and thereby made our representation full. All of which I respectfully submit to the Association.

"John F. Johnston, *President.*"

Which was accepted and ordered to be put upon record.

The Committee on Order of Business then reported the following:—

1. Should pivot teeth ever be inserted; and if so, under what circumstances, and in what manner?
2. Inflamed Dentine.

3. Treatment of Dental periostitis and alveolar abscess.

4. Mechanical Dentistry, including all the various modes of constructing artificial dentures.

5. Filling teeth.

6. Miscellaneous subjects.

Which was adopted.

On motion, members of the profession present who were not members of the Association were invited to remain and participate in the discussions.

The Committee of Examination reported the names of Drs. J. T. Turner, of New London; E. W. Morris, of Waynesburg; I. Knapp, of Fort Wayne; M. H. Manlove, of Logansport, and W. C. Stanley, of Dublin; recommending them for membership, and a ballot being had they were all duly elected.

The Association then proceeded to the election of Officers for the ensuing year, which resulted in the choice of

President.—Dr. I. Knapp. *Vice-Presidents.*—Drs. P. G. C. Hunt, J. P. Ulrey, John Hood. *Treasurer.*—T. M. Nichols. *Rec. and Cor. Secretary.*—S. B. Smith.

The Association then adjourned to meet at 9 o'clock, A. M. to-morrow.

January 4th, 1860, 9 o'clock, A. M.

The Association met and was called to order by Dr. Johnston.

Drs. Perine and Moore were appointed to conduct the President elect to the chair. On taking the chair, the President, Dr. Knapp, made a short speech replete with the annunciation of correct principles, sentiments of devotion to the profession and enthusiastic encouragement to the members. After which Dr. Johnston read a letter from Dr. S. M. Goode, of Madison, which on motion was received and ordered to be placed on file.

The Examining Committee recommended the following for membership, viz.: Drs. S. M. Goode, of Madison; — Pifer, of Lafayette; G. A. Wells, Indianapolis; and H. T. Manlove, of Logansport; all of whom were unanimously elected.

The President announced the following Standing Committees for the current year:—

Examining Committee.—Drs. P. G. C. Hunt, S. B. Smith, J. P. Ulrey, M. H. Manlove, L. W. French.

Committee on Order of Business.—Drs. A. M. Moore, G. Lupton, J. F. Johnston.

The first subject for discussion, viz., "Pivot teeth," was taken up, several members participated, giving their views; when on motion the Association adjourned to meet at 1½ o'clock, P. M.

January 4th, 2 o'clock, P. M.

Association called to order by President Dr. Knapp.

The 2d subject for discussion, namely, "Diseased Dentine" was announced. The President, Drs. Ulrey, Johnston and Lupton gave their views. When the 3d subject, "Treatment of Dental periostitis and alveolar abscess" was taken up and discussed by Drs. Dills, Johnston, Moore, Ulrey, Hunt and Manlove, and the topic passed.

On motion the order of business was suspended to enable Dr. Lupton to exhibit casts of some interesting cases of irregularity and explain his method of treating the same.

[Which will be given in the next No. of the Register.—Ed.]

Dr. Perine then exhibited several remarkable specimens of Dental exostosis and other morbid conditions.

On motion, the 4th topic in order, namely, "Mechanical Dentistry—including all the various modes of constructing artificial Dentures," was then considered, and much of interest elicited. The new "bases," "Coralite," "Amber," and "Vulcanite," received a due share of attention.

On motion it was ordered that when we finally adjourn, it be to meet in this City, at 2 o'clock, on the first Tuesday of January, 1861. Drs. Nichols and Johnston were appointed to procure a room for our next meeting.

Adjourned to 6½ o'clock, at this place.

January 4th, 1860, 6½ o'clock, P. M.

Association met. Dr. Knapp, the President, in the chair. On motion, the regular Order of business was suspended, and the subject of a "Fee bill" was taken up and considered at some length, when Dr. Johnston moved the following resolution which was adopted. The bill also, proposed by the resolution, was adopted, after being modified as below.

Resolved, That the Indiana State Dental Association recommend the following *fee bill* as a fair bill of prices for the various operations therein named, and urge the propriety of our members as far as possible adopting it.

BILL OF PRICES.

Filling smallest cavity with gold		$2 00	
" large including fang, with gold	from	6 00	to $25 00
" with Tin	"	1 00	— 2 00
Removing superficial decay	"	1 00	— 3 00
" tartar	"	1 00	— 5 00
Destroying nerve and filling fang	"	3 00	— 5 00
" "	"	50	— 1 00
Extracting	"	50	— 1 00
Inserting pivot tooth	"	3 00	— 12 00
Re-setting	"	50	— 1 00
Riveting tooth on plate	"	1 00	— 1 50
Soldering on tooth or clasp	"	2 00	— 5 00
Full sett, on gold, plain, without rim	"	100 00	— 125 00
" " gum, with rim	"	125 00	— 200 00
" " Silver	"	60 00	— 70 00
" " Platina	"	125 00	— 200 00
" " Vulcanite	"	100 00	— 150 00
" Temporary on Silver not less than		50 00	
Single tooth on gold	"	8 00	— 12 00
Each additional	"	5 00	— 6 00
Regulating teeth	"	10 00	— 100 00
Professional visit	"	1 00	— 3 00

Dr. Moore, by request of the Association, read an essay on the duties of the members of the Indiana State Dental Association, a copy of which was requested for publication.

On motion of Dr. Johnston the remaining subjects for discussion in the order of business were passed by, and the Association proceeded to the rule for miscellaneous business.

The Treasurer was instructed to correspond with delinquent members of the Association, requesting immediate payment of their dues.

On motion, the Secretary was instructed to procure 300 printed copies of the "fee bill" for the use of the Association and distribution among its members. Also a suitable book in which to record the Constitution of the Association, names of members, &c.—and draw orders on the Treasurer for the payment of the same.

Also, the President and Secretary were instructed to draw orders on the Treasurer for the amount of expenses incurred at this Session.

A ballot being ordered for the election of delegates to the Representative association, whose next meeting is to be held at Washington, D. C., in August next, which resulted in the choice of the following:

Regular Delegates.—Dr. M. N. Manlove, of Logansport; Drs. G. A. Wells, G. P. C. Hunt, and J. F. Johnston, Indianapolis; A. M. Moore, Lafayette; I. Knapp, Fort Wayne.

Contingent Delegates.—Drs. S. M. Goode, of Madison; S. B. Smith, Terre Haute; J. P. Ulrey, Rising Sun.

On motion a Committee of three members, consisting of Drs. Hunt, Wells and Moore, was appointed to audit all accounts of the Association.

Ths Secretary was instructed to take the necessary steps to secure the legal incorporation of this Association.

On motion adjourned.

S. B. Smith, *Secretary.*

DISCUSSIONS OF THE INDIANA STATE DENTAL ASSOCIATION.

1. Should pivot teeth be inserted, if so, under what circumstances, and in what manner?

Dr. Ulrey thinks it useless to talk much on the subject. Only under the most favorable circumstances is the dentist justified in inserting teeth on pivot. Relates a case in which pivot teeth were worn with satisfaction for twenty-one years, on wood pivots. His general experience is, that they may be worn from one to three years; and in very favorable cases from six to seven years. As to the manner, some use metallic pivots, others plain wood, others wood with foil or silk, can hardly say which is best, but would prefer a plain hickory pivot as it is less liable to split the tooth by a sudden jar. Thinks it good practice to fill the canal of the fang beyond the pivot.

Dr. MOORE thinks it makes a very durable, serviceable, and in appearance natural, dental substitute. Prefers to have patients with thick, strong jaws. There is generally not sufficient attention given to pivot work. Perfect adaptation is required. In good roots and favorable cases, if well inserted, pivot teeth are always satisfactory.

Dr. MANLOVE is in the habit of filling the fang above the pivot with asbestos or tin foil; finds work of this kind to last from three to four years; they do better with wooden than metal pivots. Has one case in which the fang was ulcerated; treated it in this manner, and inserted a pivot tooth, seven years ago, and it is still in a good condition.

Dr. SMITH starts out with the proposition never to insert a pivot tooth when he can avoid it. Performs the operation occasionally through the importunities of the patient; finds inflammation and ulceration almost universally supervene; and then if he can possibly get the consent of the patient, extracts the fang, and mounts the tooth on plate. Uses hickory wood pivots, well prepared, drills out the canal and fills to the point of the fang.

Dr. LUPTON has had some experience, in most cases very favorable. Do not like to insert on unhealthy fangs, but would, like Dr. Smith, prefer in such cases, to extract and insert on plate; has quite a number of cases, inserted several years ago, that are still doing well.

Dr. HUNT does mount teeth on pivot. In best operations fills to the end of the fang; drills out the fang and fills and inserts a metallic tube, fills around it with adhesive foil, and attaches the teeth with gold pivots; by this method the teeth are kept more cleanly, and are more satisfactory than by any other method. Hollows out the orifice of the canal, and fills with gold, so as to expose as little of the dentine at the articulating surface of the fang as possible. Does in some instances, insert in the old way on wood pivots; but does not consider it good practice without first treating the fang. Is decidedly in favor of pivot teeth. The fulness of arch, and expression of face and features are preserved, as they can be in no other way; has had no trouble from inflammation or ulceration in any of the cases thus prepared. Drills out the fang, then places the tube and has an assistant to hold it in position while filling around it. Grinds off the inside of the artificial crown, to open the hole, then with a small gold pivot, kept in place with wax, place the tooth accurately in its position in the mouth, then remove carefully and solder.

Considers it the duty of the dentist to preserve the form and features of the face as long as possible.

Dr. JOHNSTON agrees with Dr. Hunt. He inserts pivot teeth and preserves the natural roots as long as possible, because it more perfectly conceals the operation; should always fill the fang above the pivot with gold. When the teeth are diseased they should be treated till they are restored to a healthy condition; and in such cases finds no more difficulty than from filling a tooth, the nerve of which has been exposed.

Thinks he has made a discovery which will entirely revolutionize pivot work, both in the manufacture of the teeth, and in the mode of insertion; but as the plan is not yet perfected, does not at present feel at liberty to make it public, for fear of an accident. *Does not intend to patent.*

Dr. HARLAN, practice similar to that of Drs. Hunt and Johnston, except that he never attempts to treat an unhealthy root, prefers to put in a plate when the patient will stand the expense.

Dr. Stanley came to listen, not to talk, being young in the profession. Generally finds the root in an unhealthy condition, then recommends extraction, though does insert occasionally, then uses seasoned hickory pivots.

Dr. Morris on healthy roots, and favorable circumstances, performs the operation; fills the fang above the pivot with gold; uses hickory wood for pivots. Refuses diseased roots.

Dr. Turner has had but little experience in this operation; his knowledge is derived mostly from observation. Remembers a case in which a pivot tooth was worn for twenty years. Re-set one eighteen months ago which had been worn eight years.

Dr. Perine has not inserted a pivot tooth for years: he relates the method of Dr. Clark, of New Orleans, as described by Dr. Hunt, viz: to drill out the fang and fill with gold, then drill a hole through the gold and mount the tooth on a gold pivot, which enables the patient to remove and cleanse it; there are many methods of performing this operation; and much good work has been done in the old way, on hickory pivots; the roots being healthy and the fang filled above the pivot.

Dr. Knapp thinks the ground has been thoroughly canvassed, it is well now to let the subject rest. If he does say any thing fears he will produce some hearsay. If he could get patients to pay for it would adopt the mode described by Dr. Hunt as mere fancy, would beg leave to adopt it; but we must take cases as they present themselves. We generally find those desiring pivot teeth, expect them to last only a few years. His method is to drill out the decay, and fill to the end of the fang with Townsend's Amalgam, and while this is plastic, force the tooth and pivot into the proper position; by this method they will last three or four years.

Dr. Perine related a case, when upon examination, it was proposed to separate the central incisor, but was informed by the patient that they were artificial teeth, and on close inspection, found they were human teeth inserted on pivot; and so nicely adjusted as to almost defy detection.

Adjourned to 1½ o'clock, P. M.

AFTERNOON SESSION.

SECOND SUBJECT—*Treatment of Inflamed Dentine.*

Dr. ULREY we are frequently called upon to treat this affection. When a case is presented, and on application of an instrument, find it to give pain, concludes it is inflamed dentine. If he can have control of the patient, treat with a view of correcting a vitiated condition of the secretions. If this can not be done use escharotics; these do not restore to health but destroy the diseased part. When chlorid of zinc will not accomplish the object, uses cobalt with creosote. This is dangerous treatment, but we all sometimes resort to it. (*A few of us do not.* ED.) The best thing is to keep the cavity filled with creosote and cotton, from day to day, until the inflammation abates, but when there is not time for this use cobalt, but unfortunately this accomplishes more than is desired.

Prefers chlorid of zinc and creosote, yet use cobalt, which is in reality crude arsenic.

For sensitiveness about the necks of the teeth, touches with chlorid of zinc; this destroys the sensation, so that when the part is touched with an instrument, there is no pain experienced.

Dr. JOHNSTON does not think the subject will admit of much discussion; overcomes the difficulty by the application of chlorid of zinc, applied in as dry a state as possible. After deliquescence the material becomes worthless. In the first place excavate the cavity as thoroughly as possible; apply several times in some cases. As soon as it is dissolved the force is spent; dries out the cavity and reapplies, which soon subdues the pain; although on first application it produces a sharp, stinging pain, similar to toothache; which, however, lasts only a few moments.

When the chlorid does not answer uses a very sharp instrument in preference to using cobalt or arsenic.

Dr. LUPTON has had some experience in the use of chlorid of zinc, but generally found the application to produce about as much pain as the tooth-ache itself. Has also used cobalt, and with great satisfaction; there being no pain or sensation. In one case there was a small opening into the pulp, and found it had gone farther than bargained for.

Dr. KNAPP uses arsenic and creosote more frequently than any thing else, but rarely permits the patient to leave the office with it in the tooth, and has yet to see the first case in which injury has resulted. Permit it to remain in the tooth from five minutes to half an hour.

THIRD SUBJECT—*Treatment of Dental Periostitis and Alveolar Abscess.*

Dr. DILLS yesterday morning filled a lateral incisor which was dead,—in course of a day or two the patient returned to have the work done; there were symptoms of periostitis, produced counter irritation by the use of chloroform and sulph ether, and directed an occasional dose of pills.

Dr. JOHNSTON in the treatment of abscess passes an instrument through the point of the fang, so as to facilitate the discharge of pus through the nerve canal, leaves it so, for a while, then enlarges the canal and passes up chlorid of zinc, or creosote; prefers the former, as it is a better dissinfectant; with the two generally succeeds without further difficulty.

There are cases in which the disease returns, but generally the cure is permanent. Continues treatment thoroughly until the parts are perfectly healthy, to do this it is necessary to have entire command of the time and attention of the patient.

Dr. MANLOVE agrees with Dr. Johnston, except that he uses in addition tincture of myrrh and tannin. In ordinary cases require about ten days to treat a case. In difficult cases uses creosote right to the point.

Dr. Hunt has nothing new, except the use of leeches, uses them freely in periostitis, and thinks he has saved may cases of periostitis from resulting in alveolar abscess; when lancing or scarifying would not have served the purpose.

Dr. Ulrey admits that the application of leeches is the very best treatment which can be adopted, but not having access to them, uses scarification, and applies chloroform, ether and camphor, and other similar applications. If a greater sore can be made outside than exists inside, it may do some good. Directs also internal remedies, such as purgatives, &c., but when abscess is formed, finds extracting the only certain remedy. Do not see the propriety of keeping a tooth in the mouth that requires constant coaxing. Mentioned the case of a gentleman who wore a pivot tooth, it caused great pain; removed the pivot and introduced a broach, there was an offensive odor, introduced the broach again, and used it as a pump, made an opening for pus to escape, and thus relieved the difficulty.

Periostitis generally results in abscess and death of the tooth. The best way is at once to remove the offending member.

Dr. Moore—a case; patient twelve years old; tooth dead, thick layer of dentine on the pulp chamber, hesitated as to the best course to pursue, but filled the tooth without pain or inconvenience; a few days after was sent for, called and found the patient in a critical condition, with abscess threatening to open outside; after some urging prevailed upon the patient to permit lancing, which gave relief after the inflammation had subsided, found the case just as when filled.

Dr. Johnston supposes that there was an opening into the pulp chamber which the filling closed, and prevented the escape of pus and vitiated matter. If the tooth was dead, should have drilled through to the pulp chamber, treated, and then filled.

Dr. KNAPP suggested that the violence of an operation will sometimes produce inflammation.

Dr. DILLS stated that when the case already described, was presented, he was not certain that the nerve was dead, did try to drill into it, but found the walls so thick it was abandoned, the tooth ached both before and after filling, am now satisfied that the tooth was either dead or a process of ossification of the pulp was in progress.

Dr. KNAPP. If the patient will, in the early stages of periostitis, take a strong emetic it will generally give relief. A case of alveolar abscess, treated six weeks, there was a fistulous opening, with a drill made a free opening, and treated with creosote and chlorid of zinc as before described; cut away the process with a curved lancet, and introduced pledgets of cotton moistened with creosote; in a month the discharge ceased, and a month after the tooth was filled with "Hill's Stopping;" it has given no trouble since; if it continues so will soon fill with gold.

Dr. ULREY thinks it would be profitable to inquire into the *cause* of periostitis, as well as its treatment. He frequently finds difficulty in an *apparently* healthy tooth: in a tooth in his own mouth there are occasionally symptoms of periostitus, which he thinks are produced by exostosis.

Dr. JOHNSTON gave a case in which there was great pain, that could not be accounted for, though from biting on some hard substance the pain increased, and swelling ensued; applied leeches without effect; continued to swell, applied anodynes, iodine, ticture arnica, &c., but in spite of all the efforts the swelling increased, until it forced an opening, with a great discharge of pus; after discharging for a considerable length of time, the opening closed, and a healthy condition was restored.

Dr. MANLOVE desires to known what is to be done when teeth are worn down so near the nerve as to become sensitive and painful?

Dr. HUNT. A case of a tooth quite loose, and discharging, so much so, you could feel the pus fluctuating under the finger; the end of the fang and part of the process absorbed. After the examination commenced the treatment, and continued four months, and finally had the satisfaction of restoring it to a perfectly healthy condition, filled it and it has since done well; the patient values the tooth highly and has since declared it to be more comfortable than for twenty years. He inquired what would be a successful case of fang filling? If it swells and gives pain once is it considered successful? or must it be entirely without pain to be considered successful? Referred to a case filled five years ago, and it swelled and suppurated several years after; it is now healthy and useful.

FOURTH SUBJECT.—*Mechanical Dentistry, including all the various modes of constructing Artificial Dentines.*

Dr. MOORE scarely knows what to say, there are so many good ways and so many bad ways, all being good if well done. In his own practice has adopted continuous gum work, and vulcanized rubber, thinks the latter will not absorb secretions.

Dr. DILLS exhibited a neat specimen of sectional vulcanite work in his own mouth. He spoke of its advantages and disadvantages; thinks it will not absorb the secretions of the mouth; can say but little, from his own experience, having worn it but a few days.

If after it is vulcanized it does not fit, put it into hot water, to soften it, then put it on the cast and adapt it by pressure, thus making a perfect fit; this might be an objection in sectional pieces, as in some cases a sufficient amount of substance can not be supplied to give the required strength and stiffness, when the connections are very small.

Some beautiful specimens of "Amber Base" and Vulcanite were here exhibited which elicited some interrogatories, answers and comments.

Adjourned to 7 o'clock, P. M.

EVENING SESSION.

Association met at 7 o'clock, P. M.

On motion of Dr. Ulrey,

Resolved, that the subject of fees and a fee bill be now taken up for consideration.

The subject was ably discussed and the different points presented by Drs. Lupton, Johnston, Dills, Ulrey, Knapp and Stanley.

Dr. HUNT remarked that if a fee bill was adopted it should be in no particular below the one recommended at the last meeting; if any variation make it higher; and that it be obligatory on members to charge no less, but as much higher as they choose.

On motion of Dr. Johnston,

Resolved, that the Indiana State Dental Association recommend the following fee bill to the profession of Indiana as a proper minimum of prices for the various operations therein named; and urged members as far as possible to adopt and adhere to it.

For FEE BILL, see page 363, present number.

By request Dr. Moore read an able essay on the duties of the members of the Association. Dr. Moore was requested to furnish a copy of the address for publication.

Dr. KNAPP suggested that if members would write out short articles on topics not embraced in the subjects for discussion it would be attended with great benefit.

On motion of Dr. Johnston,

Resolved, that we omit subjects five and six, and proceed to miscellaneous and unfinished business.

SEVENTH SUBJECT.—*Miscellaneous and unfinished Business.*

Dr. LUPTON exhibited some casts and appliances for the correction of irregularity, with a description of the method of using the latter. (Which will be published in the next number of the *Register.* Ed.)

The minutes were read, corrected and adopted. After which the Association adjourned.

MEETING OF THE MICHIGAN DENTAL ASSOCIATION.

The fifth annual meeting of the Michigan Dental Association, convened in the city of Detroit, Tuesday evening January 10th, 1860, at 7 o'clock, and was called to order by the President, Dr. Porter of Ann Arbor.

The minutes of the last meeting were read by the Secretary and adopted.

On motion, Dr. G. H. Perine, of New York, Dr. A. Mayo, of Sandusky, Ohio; Dr. W. H. Atkinson, of Cleveland, O., were elected honorary members of the Association.

On motion, Drs. Porter, Atkinson, and Cahoon, were appointed a committee to prepare the order of business for this meeting.

On motion, Drs. Cahoon, Chittenden and Farmer, were appointed to examine candidates for admission to the Association.

On motion of Dr. Benedict, an invitation was extended to all practicing Dentists out of the State, and all students who are prepairing for the practice of Dentistry, to attend the meetings of the Association.

The Committee on candidates for membership, reported in favor of the following named persons who were unanimously elected: Dr. J. S. Corbin, of Ann Arbor; Dr. W. Y. Cleland, of Detroit; Dr. G. M. Cole, of Detroit; Dr. L. A. Rogers, of Grand Rapids.

The Association then proceeded to the election of officers for the ensuing year.

President, Dr. C. S. Chittenden, of Hamilton, Canada West;

Vice President, Dr. Wm. Cahoon, of Detroit; *Secretary and Treasurer*, Dr. L. C. Whiting; *Executive, Examining and Publishing Committee*, Drs. H. Benedict, J. H. Farmer, T. H. Farmer, and T. A. White.

Meeting then adjourned to 9 o'clock Wednesday morning.

WEDNESDAY MORNING.

Dr. Porter on retiring from the Chair made a short but elegant address.

Dr. Chittenden on being conducted to the Chair made a few remarks, thanked the Society for the honor confered upon him, and should do the best he could to serve them.

Committee reported order of business which was adopted.

Several essays were read on difficult dentition, the effects of diseased teeth and gums on the general health of the system, after which a discussion was entered into which elicited much interesting information.

Adjourned to meet again at 2 o'clock P. M.

AFTERNOON SESSION.

Meeting convened at 2 o'clock, P. M., and the discussions continued, with reading correspondence, &c.

On motion of Dr. Porter, a committee of six was appointed to write essays on the different subjects for discussions at the next meeting.

The following were the committee with the subjects on which they were appointed to write:

Dr. Whiting, on the effects of Diseased Gums and Teeth on the general health.

Dr. Porter, on Difficult Dentition.

Dr. Farmer, on Neuralgia and Rheumatism.

Dr. Mansfield, on Mechanical Dentistry.

Dr. Cahoon, on Dental Etiquette and Fees.

Dr. Chittenden, Second Dentition.

On motion of Dr. Porter, *Resolved*, that the delegates to the National Society be elected by ballot.

On vote, Dr. Whiting and Cahoon, of Detroit, were elected delegates to the National Society.

On motion of Dr. Benedict, *Resolved*, that the delegates have power to appoint substitutes in case they can not attend.

On motion of Dr. Porter, *Resolved*, that one half the traveling expenses of delegates be paid by the Association.

On motion of Dr. Porter, *Resolved*, that the dues remitted to members heretofore be paid, in order to raise funds to pay expenses of delegates.

On motion of Dr. Mansfield, no member of this Society shall take a student into his office, and engage to teach him the practice of either department of Dentistry, in less time than two years; and all such students, during their pupilage, shall have the privilege of attending the meetings of the Society, but shall take no part in its deliberations.

On motion, *Resolved*, that Mechanical Dentistry be the subject of discussion in the evening.

Moved that Dr. Atkinson of Cleveland now read an address to the Association.

After the address Society adjourned to 7 o'clock.

EVENING SESSION.

Moved that when the Association adjourns, it does so to meet at Ann Arbor, the second Tuesday of January 1861.

On motion, *Resolved*, that a vote of thanks be given those members of the profession, who have sent their fee bills for the benefit of this Association.

Moved the Association adjourn at 9 o'clock.

The evening was spent in interesting conversation on Mechanical Dentistry.

L. C. WHITING, *Sec'y.*

CONSTITUTION AND BY-LAWS OF THE CINCINNATI DENTAL ASSOCIATION.

CONSTITUTION.

ARTICLE I.

This Society shall be known by the name of the "Cincinnati Dental Association."

ARTICLE II.

The objects of this Society shall be the mutual improvement and professional intercourse of its members.

ARTICLE III.

SECTION 1. The officers shall consist of a President, Vice President, Recording and Corresponding Secretary, and Treasurer.

SEC. 2. The officers shall be elected semi-annually in September and March and shall serve until their successors are elected: the election shall be by ballot.

SEC. 3. It shall be the duty of the President to preside at all the meetings: and, with the concurrence of the Vice President or Secretary, to call extra sessions whenever occasion requires.

SEC. 4. It shall be the duty of the Vice President to preside in the absence of the President and to perform the duties devolving on that officer; and also to counsel with the President with difficult points.

SEC. 5. The Recording Secretary shall keep a record, (in a book provided for the purpose,) of the proceedings of all meetings; take charge of all papers and documents belonging to the Society and file the same; and serve notices.

SEC. 6. It shall be the duty of the Corresponding Secretary to conduct the correspondence of the Society not connected with its members; to keep a correct copy of all letters written by himself officially, and a file of all he may receive. He shall also report to the Society as often as any thing shall occur to him, officially, of interest to the Association.

Sec. 7. The Treasurer shall hold in trust for the Society any and all funds belonging to the same, and pay them out on the order of the Secretary, and collect all assessments and dues.

ARTICLE IV.

Sec. 1. The meetings shall be held at such time and place as a majority of those present may determine.

Sec. 2. Business details shall be governed by such by-laws as the Society may be pleased to adopt.

Sec. 3. Five active members shall constitute a quorum for the transaction of business.

ARTICLE V.

Sec. 1. Any reputable dental practitioner in the city of Cincinnati or vicinity may become an active member of this Association by receiving a vote of two-thirds of all the active members, signing the Constitution, and paying into the treasury the sum of two dollars.

Sec. 2. Any reputable dental practitioner, not a resident of Cincinnati or its vicinity, may become an honorary member of this Society by receiving a vote of three-fourths of the active members.

Sec. 3. Any reputable practitioner of medicine may become an honorary member of this Society by receiving a vote of two-thirds of the active members.

ARTICLE VI.

This Constitution may be altered or amended—notice of the same having been given one month previously—by a vote of two-thirds of the members of the Association.

BY-LAWS.

ARTICLE I.

Honorary members shall be entitled to a seat at all meetings of the Society, and shall have the privilege of participating in all debates not involving pecuniary expenditures.

ARTICLE II.

The following shall be observed as the general order of proceedings of each meeting:

Reading minutes of previous meeting.

Election of new members.

Report of Committees.

Reading Essay and remarks on the same.

Discussion of the stated subject.

Written or verbal reports of cases.

Modes of practice,—Surgical, Medical, Operative and Mechanical.

Miscellaneous business.

Announcement by the President of Essayist and subject for discussion at the next ensuing meeting.

Adjournment.

ARTICLE III.

Sec. 1. The stated subject for discussion shall be designated by the Society, and the President may appoint one or more persons to lead in the debate or to prepare a paper on the same.

Sec. 2. No member shall be permitted to speak longer than ten minutes, or more than twice upon any one question without express permission of the Society.

Sec. 3. Any member may be called to order for personal recrimination, or for digressing from the subject of debate.

ARTICLE IV

These By-Laws may be altered or amended at any regular meeting of the Society by a vote of two-thirds of the members present: provided notice of such alteration or amendment shall have been given at a previous meeting.

Correspondence.

Messrs. Editors :—I have just come across an interesting notice by a Paris correspondent of a New York paper, of the new French discovery or method of producing anæsthesia, and from which I make a few extracts, presuming they may interest your readers and induce experiments.

The writer is hopeful that in this method a welcome rival to chloroform has been found, and one that is free from all risks ; and suggests that it may be the key by which animal magnetism and kindred mysteries can be explained.

"Take any small brightish object, a knife blade, penholder, half dime, for example: Hold it before a person's eyes, a little within and above the range of his or (which is better) her easy vision, so that when she looks at it, and thinks of it fixedly, as she must be engaged to do, she will have to squint convergently, upwardly and abominably, and the chances are, that in a space of from one to three minutes, she will have passed into a state of unnatural sleep, nervous sleep, artificial catalepsy—what two weeks ago we would have styled (with more or less of a sneering tone, most of us), magnetic sleep, what we now solemnly style *Hypnotism.* Now you may raise her two feet from the floor, tickle the soles of them, pull out the eyebrows, set out one arm like a pump-handle, throw up the other like a flagstaff, cut off one of them if need be, and she will not move, complain, or feel fatigue or pain. When you have experimented sufficiently, blow upon her eyes, rubbing the latter gently if you choose, with your fingers, and she will wake up utterly unconscious of all that has happened.

* * * * * * * * *

"All medical Paris is busy now with experiments in Hypnotism. * * * * * * * * Dr. Broca, an eminent surgeon here, at the suggestion of Dr. Azram of Bordeaux, who had been set to look into the matter by reading a book of Dr. Braid, of Manchester, England, published in 1843—Dr. Broca, I say, began his experiments last month, in one of them performing what would otherwise have been a painful operation on a patient who was utterly unconscious of it till it was over, and she restored to her natural state. He made a report of his experiments, which Velpeau, one of the greatest and most incredulous, tough old surgeons of the world, consented to read before the Academy of the Sciences. Velpeau is too careful of his great reputation, as well as too careful and cautious a man to countersign Dr. Broca's note. But the mere fact of his reading it immediately gave its statements a certain authority. It was as if he had said to all the members of the profession: 'Here, these experiments are respectable; you can go on and make more without risking your little professional dignities and reputations, and run of practice. I, Velpeau, have said it.'

"And now all hands, Trousseau, Nelaton, and all the lesser and little ones are setting their private patients and inmates of the hospitals asquinting inwardly, upwardly and abominably to a cataleptic degree, and under the new title (invented by Braid in 1843), of *hypnotism* (which is Greek *vrvos*, for sleepism, nothing more), are seriously investigating facts."

Who says we are not an enterprising—an *expansive* people, and that *our profession* is not a power in the land?

Look for a moment at the extent of its representation abroad. Nearly all the crowned heads of Europe depend upon American dentists for the care of their teeth, and almost every capitol of Europe has its representative of American dentistry. This surely is something to be proud of professionally; but the word is still "ONWARD," for, as I have just learned, the dominions of the "brother of the sun and moon" is to be honored with the presence of an American dentist.

A gentleman attached to the American embassy in China, has written home to a friend in this city, asking him to prevail upon some good dentist to go out there, as the European and American residents—of whom it seems there is quite a large number—greatly need and desire his services and guarantee ample remuneration; and per consequence, a young practitioner of this city is now, I am informed, preparing to go.

We may now, I think, with much reason, soon expect a similar call from Japan.

A good many inquiries are made in regard to the nature of the settlement between the Hard Rubber Company and E. A. L. Roberts, on the subject of the patent for vulcanized rubber for dental purposes.

Many questions are asked in reference to the validity of the patent, and whether it has been established in a court of justice, etc. Can you or any of your readers answer?

Yours, O. U. C.

PHILA., Jan. 12, 1860.

CURIOSITIES.

MESSRS. TAFT & WATT.—*Gentlemen:* We have just had presented to us the rare phenomenon of *reproduced* enamel. We would report it for the consideration of *our* dental *savans,* who will no doubt be able to tell us whether the new-formed substance, in this "instance," be *bona fide* enamel? *osteo-dentine*? or a mere "*dental anomaly?*"

Mr. H., now residing in this county, while in the South some years ago, had an attack of yellow fever. "Snake root tea with *nitric acid* on it," was administered, but without using any protective for the teeth. The gentleman came out of the ordeal with his teeth "black as his hat." The upper central incisor was injured very much, a groove being cut across the labial surface, midway between the edge and neck of the tooth. Mr. H., expected nothing else but he should lose the tooth, and consequently sought no professional aid. To his great surprise, however, he observed his tooth began to fill up in the "deep groove." The process of *re-generation* continued till the incisor regained its original form.

Mr. H., possesses a "magnificent" set of masticators—a fact which has contributed, no doubt, to produce this anomalous occurrence. The *new formation* has every appearance of pure enamel!

In regard to the *possibility* of the enamel of a tooth being "*twice generated*," we are aware that such men as "George Waite, Esq.," have said such a thing can not be, for the simple reason, (according to their *theory*,) that "no parts are left to concur in the action" of *re-generation.* But, here is "a natural fact," and all we wish to have considered is, does it amount to "a demonstration?" May it not be that there are more "truths" in dental science, than are "dreamed of" in all *our* "philosophy?" *Magitot* says "the enamel, after the tooth is developed, undergoes a *very slow* organic movement," and he also says, that this tissue is subject to "changes of density and coloration." Under certain circumstances, (*propitious* for instance) might there not be a very "*rapid*" organic movement, which could produce the seemingly impossible "action" of re-produced enamel substance? Messrs. Editors, the stubborn "fact" before us, stumps us! Can't you help us out?

Another *curiosity* in dental "experience," met with lately, was a singular tooth we extracted for a young *negress.* It would puzzle a "Philadelphia" *dentist* to tell whether it be a monster *supernumerary* or two temporary incisors in a state of amalgamation. The tooth occupied a place behind the *permanent* incisors, and is a rare "conglomeration" of two teeth! Two incisor *crowns* are distinctly developed, and on the cutting edges form the letter *x.*

Our third and last *curious* case, is the existence of *Deciduous Teeth* at the age of twenty-six years. A gentleman in Taneytown, Md., flourishes *eight* lusty incisors in his upper maxilla. The teeth are in two regular rows, the *temporaries* the posterior ones, which are so firm and large as to be scarcely distinguishable from the permanent ones. When the jaws are closed, the lower incisors fit snugly between the two rows above, giving the possessor no inconvenience, and making his "bite" rather formidable, to be sure!

Sorry we have nothing just now more *practical* for your progressive pages, but if you esteem the above worthy of notice, you *might* confer an honor upon us by publishing our budget of "curiosities."

GEORGE S. FOUKE.

Westminster, Md., Jan. 18th, 1860.

The stubborn fact should be very carefully examined. Consolidated dentine polished by prolonged friction or otherwise, sometimes assumes almost the appearance of enamel and might deceive on a slight examination. W.

Selections.

MICROMETER GIVING WITHOUT CALCULATION THE DIMENSIONS OF MICROSCOPIC OBJECTS.—[We translate from Dr. Brown-Sequard's *Journal de Physiologie* the following note by Dr. Corelier, on a new micrometer.]

The measuring of objects is undeniably of the utmost importance for the microscopist. This is at present accomplished by means of an arbitrary scale, placed beneath the ocular. The relation of this scale to a millimeter divided into one hundred parts is first obtained; then ascertaining how many degrees of the scale are occupied by the object we wish to measure, we obtain the required dimensions by means of multiplication and division. This calculation, simple as it is, becomes tedious by repetition; it may be avoided in the following manner:—I place in the focus of the ocular a scale in which the millimeter is divided into ten parts such as is found in all modern microscopes. I then ascertain the proportion existing between this division and the millimeter divided into 100 parts, or micrometer. Suppose that 27 divisions of the ocular equal 19 hundredths of the millimeter; I have another scale made, in which 27 tenths of a millimeter are divided into 19 parts. This new scale placed beneath the ocular gives at once, and without calculation, the hundredths of a millimeter, as can be easily ascertained by looking, in the microscope, at the millimeter divided into 180 parts, for the division of the two scales will exactly correspond. To obtain at once the thousands it would only be necessary to divide the 27 tenths of a millimeter into 190 parts, &c. Of course it is necessary always to employ the same objective, and hence it is well to construct the scale for the one which we are most in the habit of using. It is now a long time since I have made these micrometers for my own use, and I have found them so convenient that I deem it my duty to explain their mode of construction, and to recommend their employment.—*Boston Med. and Surg. Jour.*

FALSE TEETH IN ŒSOPHAGUS FIFTEEN DAYS.

BY A. P. DUTCHER, M. D.

Mrs. S., aged twenty-five, just after retiring to rest last evening had an epileptic convulsion, after which she was insensible during the remainder of the night. In the morning she was sick at the stomach, and vomited very freely several times. In the afternoon the sickness left her, and she tried to take some food, but was unable to swallow. The next morning she could swallow water, but nothing in the form of solid aliment. Having now fully recovered her senses, she for the first time informed her friends that she had swallowed her false teeth. I was then called in, and on examination found them lodged in the oesophagus just above the diaphragm. As I had no throat forceps of sufficient length to reach them, and did not like to force them into the stomach, I told the family they had better call in some surgeon, who would have the necessary instruments for their removal. As they did not cause her any pain, she thought that on the next day she would go to Salem, Columbiana county, Ohio, and have them taken out. She did not, however, go until Mondav, the 31st. The individual that was applied to had forceps, but none long enough to reach them. He concluded, however, with the consent of Mrs. S., to pass them into the stomach. After manipulating for a few minutes with a gum-tube, he assured her that they were in the stomach. She returned home the same evening. Her throat was not much inflamed from the operation. She thought she could swallow some better. In other respects she was very comfortable.

On Friday morning, Nov. 4, she took labor, and had a speedy delivery of a child at term. I did not attend her during the confinement. She appeared to do very well until Thursday, the 10th, when I was again called to see her. She was still unable to swallow anything but fluids. Pulse 90, and respiration 25 per minute. Complained of pain at the inferior portion of the sternum, and under the right scapula. From the pain and difficulty of swallowing, I came to the conclusion that the teeth were still in the oesophagus. On examination, I found I was correct. The case now having assumed an alarming character, Dr. John Dickson, of Pittsburgh, Pa., was sent for. He came on Friday afternoon. After the most persevering efforts and skillful manipulation, he succeeded in extricating them from the position they had occupied for more than fifteen days. Her throat was very sore for several days; had some fever, cough, and expectoration, but is now (Dec. 2) in her usual health.

The plate was made of silver. It was two inches long and one inch wide, with four teeth upon it. The instruments used in extricating it were a probang and the long throat-forceps. The probang was such as is commonly used in cauterising the throat. A piece of muslin was tightly drawn over the sponge, and secured to the handle; it was then thickly covered with nooses of strong thread. The forceps were fourteen inches in length, and made after the fashion of Weiss' urethra-forceps, used by many surgeons for the removal of calculi under a certain size from the bladder.

Removal of Body of Superior Maxillary Bone.—By the courtesy of Prof. Pancoast, the operation for removal of the superior maxillary bone was performed by his colleague, Dr. Gross. The patient, was 69 years of age, a miller, and of temperate habits. The tumor protruded outwardly, and also toward the nasal cavity. It had gradually increased since the time it was observed, four months ago.

The affection Dr. G. presumed to be encephaloid—fungus hæmatodes—soft cancer, the nature and structure of which it was unnecessary now to dilate upon, as he had lately explained it fully in his lectures. The disease here had evidently commenced in the maxillary sinus, probably in the mucous membrane, possibly in its periosteal lining. It was comparatively limited. The alveolar and palate processes were not affected; only the anterior wall of the antrum was involved. It was without pain, there was no discharge, and the general health of the patient was good. It was, therefore, a case in which the surgeon was justifiable in performing an operation for the relief of the patient.

If the tumor should remain unmolested, it would encroach, ere long, upon the surrounding structures in all directions. At a later stage we should find involvement of the lymphatic ganglions in front of the ear and below the jaw. When the disease was in this stage he usually declined operating, as he should also when it made rapid progress, or was of long standing, with marked cancerous cachexia in the patient, evidenced by sallow complexion and rapid wasting of the flesh and strength.

The operation would consist in the excision of the diseased structure, cutting freely into the surrounding structures, so as to remove the atmosphere, as it were, which enveloped the diseased portion. The data of operations upon the upper jaw, Dr. G. remarked, were imperfect. He had performed many, not always with a happy result. His colleague, Dr. Pancoast, he believed, had performed more, and met with greater success. It was certain, so far as his experience went, that the operation was not so generally successful as that upon the lower jaw. He must say to this patient that he would perform the operation to the best of his ability, and leave the result to nature.

After the administration of ether and the extraction of the middle incisor tooth of the diseased side and a molar, which were in the way of the operation, a curvilinear incision was made from the ear to the middle of the right side of the upper lip. The hemorrhage following this incision made it necessary to stop and secure several bleeding vessels. The cheek was then separated from the bone, and the outside of the tumor exposed. At its outer limit the union was detached by sawing through the malar bone; the ascending process and horizontal portion of the superior maxillary were divided by pliers, and the diseased body of the bone was removed in mass. A portion of the orbital surface was also included. The excavation was then examined with minuteness, in order to remove every portion of the cancerous growth. The wound, Dr. G. observed, would be closed with the twisted suture, and he would expect it to heal by the first intention.—*Phila. Med. and Surg. Reporter.*

☞ The Executive Committee respectfully submit the following subjects for discussion, at the next meeting of the Mississippi Valley Association of Dentists:

I. Mechanical Dentistry,
   Continuous Gum Work,
   Vulcanite Base,
   Cheoplasty,
   Gold Work.

II. What is the best treatment when the pulp of a tooth is exposed, in order to secure its vitality?

III. Filling teeth.

IV. Irregularities of the teeth, their causes and modes of treatment.

V. Structure and nutrition of the Dental Tissues.

VI. Hemorrhage following extraction of the teeth and best treatment.

E. Collins,
L. B. Hatch, } Committee.
H. A. Smith.

Editorial.

A CORRECTION.

There are some intimations and expressions in an article on "dental advertising," by Dr. C. C. Dills, in the last number of the Register, which require a little correction. In that article the statement is made that the movement which was suggested in the November number of the Register, on page 243, is simply an embodiment of refined dental advertising, and that it is to be carried out by "urging these productions upon the country press for gratuitous publication."

Everybody knows what is the aim and intention of the ordinary, *egotistic* and *bombastic* style of advertising. Egotism characterizes them all. "Dr. B. can do any thing that anybody else can, and does it in a superior style, he also does some things that nobody else can, *and he insures all his work,* and besides he defies all competition, and has availed himself of every possible opportunity and facility for obtaining a knowledge of his profession."

Now here is the marrow and essence of quack advertising. Now the most superficial observer will see at a glance the nature, aim and intentions of such assertions. The sole object is to induce the people to patronize the *advertiser.*

Now, a statement (and it is not material how full) of what the *science* and *art* of a profession enable its members to do for suffering and marred humanity, is altogether a different thing, and entirely admissible when a want of intelligence upon the part of the people renders it necessary. Now in regard to the popular essays referred to, it is the intention to teach the real importance and value of the teeth, the means to be employed for retaining them in a healthy condition, and to direct attention to the practices and agencies by which they are injured and destroyed, and last of all, to direct attention to the proper means for restoration to health when they have been diseased. Preservation first, and after this restoration.

If such articles savor of quack advertisements, then we are utterly at fault in perception ; and the attempt to classify them as such is only excusable on the ground of inability to perceive the difference.

Modes of practice should scarcely, if at all, be touched upon in popular essays, yet it is occasionally admissible. The assertion that the publication of such essays, would be *urged* upon the country press, and sponged from them, is simply ridiculous in the extreme. Nobody will ever be *urged* to print them. They are prepared primarily and chiefly for the good of the people ; and all such articles, upon any subject, all editors who are true men, will be anxious to publish without *urging.* T.

* * *

ASSOCIATIONS—MEETINGS.

The Ohio Dental College Association will meet according to adjournment on Monday, February 20th, at 2 o'clock, P. M. It is a matter of regret that the meetings of this Association are not better attended by its members.

We have thought that there are two or three considerations that should induce all those interested to attend. There is pecuniary investment in which all the members are interested, and which should receive their attention.

And more than this is the object of the institution, viz., the training of those about to enter the profession ; this is a subject in which all the members of the profession are deeply interested, and one which they can control at pleasure, for *weal* or *woe.*

Professional education lies at the foundation, and should be fostered and sustained by all.

All who are interested in the profession should aid in sustaining and promoting its literature and education ; and yet it is discouraging to see how little interest is manifested by many. Every dentist should visit our Colleges and become familiar with, and take interest in their operations, and extend their cöoperation, and in this way increase their efficiency.

It is not just that the weight of these enterprises should rest wholly upon the shoulders of a few feeble instruments.

We hope that the members of the profession in the West, at least, will come in and let us have a full meeting of the Dental College Association.

The MississippiValley Association meets in the Ohio College of Dental Surgery, on Wednesday the 22d of February, at 10 o'clock, A. M., (not on the 21st, as stated in the minutes of the last meeting.)

Fellow practitioners, look back on the doings of this society for the past fifteen years, and see what it has done for the profession, and if in this, there is no inducement for you to attend its future meetings, we should expect to fail in presenting any other argument as an inducement to secure your attention.

We will meet the *veterans* of this society, and we hope to have many accessions to its ranks.

And we hope all who come will bring a *tribute.* We always regret to see any one come with any thing so tightly bound up it can't be opened out. T

☞ We have just received a "Dental Essay," containing sixteen pages, for popular reading, by Dr. J. F. Wilson, of Louisville, Ky.

This "little book" contains some valuable hints, but does not occupy the ground fully; but probably as well as sixteen small pages could do. We think this a good method of giving information to the people in regard to their teeth, and the best means of taking care of them.

Care should be taken that they do not partake of the character of advertisements or placards, than which nothing is more offensive, and more completely defeats the object that should be attained, in an enlightened community. T.

◆

THE DENTIST'S SHOOTING MATCH.

The New York Journal is the only one that took notice of the shooting match at Niagara. We forgot all about it; but our readers who heard of it, of course, took it for granted that *Hunter* won the prize. *Western Hunters* do such things. But if, as the Journal tells us, "the shooting was very equal," on what principle was the award made? If the shooting were merely *equal* it would be difficult to determine who was victor, but when *very* equal it would be still more so. W.

◆

TEETH.

We have recently obtained a lot of teeth from the manufacture of Crosby & Co., which possess the points desirable in porcelain teeth, in a very marked degree, viz: form, texture, color, shade, &c.

They may not posses all these points to perfection but they are certainly good teeth. A very considerable discount is made from the ordinary price of such teeth; so much as to be quite an inducement to those who purchase. There are some teeth amongst them unlike anything we have seen before, so that, that far an unoccupied niche is filled by them, and we think it desirable now to have some of them always at hand. T.

DENTIST ENGAGEMENT BOOK.

We have received an engagement book, which was gotten up and published by Jones & White, of Philadelphia.

It is better arranged than any thing we have before seen, for this purpose, the days of the week and hours of the day only are given, and not the month or day of the month, or the year, either or all of these can be added if necessary.

By this arrangement every page can be occupied.

The day and hour is given, so that it is only necessary to place the name of the patient opposite the hour of the day for which the engagement is made.

We have tested it, and our advice is, *try it.*

For sale at the Dental Depots. Price 75 cents. T.

THE COMMENCEMENT EXERCISES,

Of the present session of the Ohio College of Dental Surgery will be held in the first lecture room of the College on Wednesday evening, February 22, at 7½ P. M., when we hope to see the friends of the institution; and all who feel an interest in the progress of Dental science, are invited to be present.

GOLD FOIL.

We have made some experiments with "Competition" Gold Foil from Sutton & Raynor, which is manufactured by them. It is quite adhesive, but like other foil requires annealing, and welds very perfectly, when worked with good points. Fillings made with it are susceptible of a very high finish, which is always an indication that its cohesion is good. The fillings we have made with this foil have not been excelled by any fillings we have made with any other preparation of gold. We would advise all who use the best foil they can get, to try this, and if it is uniform they will find a good article. T.

REMOVAL.

We learn that Dr. H. A. McDaniel, a graduate of the Ohio College of Dental Surgery, for sometime a resident practitioner of Hopkinsville, Ky., and for the last few years, of Nashville, Tenn., has removed and permanently located at Huntsville, Alabama.

The citizens of Huntsville may congratulate themselves upon the acquisition of so thorough an operator; careful and skillful, and withal a high toned gentleman. T.

THE
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Original Essays and Communications.

SUPERFICIAL DECAY.

BY GEO. S. FOUKE.

The term "superficial" is a dental technicality, the signification of which should be clearly comprehended. What is "superficial decay?" Is it synonomous with *incipient* decay? Not necessarily. Slight or shallow decay located on the surface of the enamel, externally, and not penetrating the substance of the enamel tissue, is properly *superficial* decay. Decay just beginning or commencing, either on the surface of the enamel, or at any appreciable point beneath the surface, is *incipient* decay.

A mere "roughness" marks the incipient stage of *superficial* decay, but if the disintegration advances materially into the substance of the enamel, or reaches the confines of the dentinal tissue, the affection should then be no longer recognized as superficial decay, but should be considered "deep-seated."

This distinction recognized, we should then distinguish the first stage of decay on the external surface, as *incipient* superficial decay, and the first stage of decay, not clearly *on* the surface, but obscurely located *interiorly*, we should denominate *incipient deep-seated decay*.

All decay, according to the generally received opinion, is from the surface, and beginning on the outside of the tooth. This opinion we do not design here to controvert. We would barely remark that the attack of decay, and the entire *res gestæ* (things in progress,) of its destructive march, are eminently *suggestive!* The enemy is both insidious and powerful! These are phenomena attendant upon the commencement and progress of dental decay, which, practically, are *just as good* as if caries actually begun its attack *interiorly* and not exteriorly on the surface of the enamel!

Decay may have its starting point in a very minute "congenital" defect *on* the enamel, but before the "weak point" is discovered the whole *internal* bone and considerable of the enamel in the *dentinal* regions are "irremediably" destroyed.

A *congenital* defect "in" the substance of the enamel, or even *in* the substance of the dentine, may not be after all a pathological impossibility! A defect may be so situated that whilst it reaches the surface, it may also extend simultaneously to the *interior* of the tooth. If *caries* commences its attack in this obscure defective portion of the enamel, it should not be regarded as a merely incipient superficial decay, it would be better to look upon the species of dental caries as *deep-seated,* and denominate it *incipient* deep-seated decay.

The proper treatment for *incipient superficial decay* is, ununqestionably, *filing.* Here the instrument is "invaluable!" Establish the certain existence of "superficial decay," in the only sense it should be recognized, and it would be safe to lay it down as "a rule," that teeth *should* be filed for "the removal" of such existing decay.

It is scarcely necessary to remind the dental practitioner that the treatment must be *timely!* In "few" cases does the decay remain long "superficial!" If it be taken, however, whilst it is *slight* or *shallow,* or clearly confined to the external surface, there would *not* be "comparatively few cases of superficial decay presented to our notice calling for the employment" of the file. Their number, me thinks, would be "legion."

In the treatment of superficial decay by filing, it is thought "age," "temperament," "habits of cleanliness," etc., should largely control or "govern" our action. *These* "considerations" may determine "the conditions *un*favorable," and, "if the teeth are not sufficiently decayed for filling," the course recommended is to "cleanse and burnish," and *wait!* We must *watch*, and when the proper time arrives for "filling," *wedge* "the teeth apart."

We have treated superficial decay on the approximal surfaces of *temporary* incisors at the age of *two*, *three* and *four* years, by carefully removing the affected parts with a *file* or *excavator.*

"Age" leaves a wide margin! So does "temperament," and also "habits in regard to cleanliness!"

"First class" teeth may be very properly regarded as the "fittest subjects for the file," in the removal of decay when it is superficial. But we recognize *so many classes* and *grades* of teeth. (nearly as many as there are grades and varieties in the human *features*,) that we can not help but believe that there are many teeth that are not *first class* that would be greatly benefited, if not permanently secured by employing "judiciously" upon them the file for removing incipient evils when existing in the form of superficial decay! It has been our lot to see "hundreds" aye, thousands of teeth that were saved by a "judicious" use of the file!

The treatment proper in *deep-seated* decay, in its *incipient* stage, must be determined by circumstances. *Filing* is seldom the course indicated. There are instances of rather extensive decay having been permanently arrested by *filing alone.* We remember one remarkable case.

In 1848 we were practicing in our native county (*Jefferson*, *Virginia.*) A young lady, aged about 20, had us to *examine* her teeth *prudentially.* Her teeth presented to the observer a fine appearance—no one would hardly "dream" a dentist had touched them! The incisors were slightly separated! We placed a glass in the lady's mouth, and we were never more surprised, dentally, than we were at the picture our eyes beheld! The appearance of the four upper incisors was then daguerreotyped on our mind never to be erased! All the approximal surfaces were *filed* to an almost incredible extent. Each tooth was filed diagonally till the planes of the filed surfaces came to within one *sixteenth* of an inch of each other, on the lingual or the palatine surface of the enamel. The *dentine* was clearly filed in the operation. The clear, firm, polished, healthy aspect of the filed surfaces, vied with the bright and beautiful enamel that covered her teeth! Our exclamation upon seeing the teeth was, "Why your teeth are filed!" Our fair visitor remarked, "Oh yes, Dr. K. filed my teeth eleven years ago!" It is now twelve years since we saw the lady, not having seen her since the occasion we are speaking of. If the lady is still living we feel confident she still has those remarkably filed incisors in her mouth.

This case impressed us deeply as to the *invaluableness* of the file in removing and arresting dental decay, but *we* have seldom ventured upon such a "bold" employment of the instrument! It has been a "model," however, that we have imitated in some cases!

In the case of *molars* and *bicuspids*, when decayed on their approximal surfaces, great caution is required in deciding whether to file or not, in their treatment. The certainty of the existence of purely *superficial* decay is generally very obscured, and the conformation of the teeth themselves is against filing. The "V" shape usually practiced is decidedly objectionable, and a *diagonal* cut requires too great a quantity of the solid enamel to be removed on the palatine sides.

We had a case last week (January 25th), of an evident attempt to save two *bicuspids*, by filing for what was no doubt supposed to be *superficial* decay, but which proved to be decay of a *deep-seated* kind. We give the case illustratively, in the hope it may be instructive :

Miss P. had the second bicuspids of the upper jaw treated for decay in the front approximal surfaces, by a dentist in a neighboring city. The time of treating the case was in August last. We had examined the teeth a few months previously. The teeth were filed and plugged in the month mentioned, but the plugs came out shortly after they were inserted. We were called upon to *re-fill* these teeth. We found that the file had been used very *elaborately*, a large "V" shaped space existing. It struck us an attempt had first been made to remove the decay simply by filing, but the cavity of decay proving to be too deep, plugging was then resorted to. But the worst kind of cavity, in consequence of the extensive use of the file, had now to be filled, and both plugs came out in a short time.

Had a different course been adopted in the treatment of these teeth, we feel no doubt but they could have been preserved. The teeth can be only saved now by extirpating the nerves, and proceeding as such treatment requires. The teeth are much " mutilated."

In further illustration of this subject, namely, the treatment of what may be supposed to be only superficial decay in *bicuspids* and *molars*, we will present a case that we treated *this day*:

Mr. N. R. brought to us this morning his daughter, aged 16 years, to have one tooth " filed." The teeth of this young lady are good—not far from *first class.*

"Something was wrong" with the lower first permanent molar. The "difficulty" was between it and its neighbor bicuspid. Too close "to thrive!" The parent thought "filing would do."

We *dissented.* Things looked pretty fair externally. But we suspected a " deeper-seated" *difficulty* than was supposed by the anxious parent to exist.

We chose to use the *drill.* Placing a flat drill about one sixteenth of an inch from the front approximal edge on the masticatory surface of the molar, we drilled through enamel apparently sound. A large cavity was soon laid open which we plugged. The other teeth all looked fine and seemed sound. We suggested that perhaps the corresponding molar on the other side of the jaw was similarly affected, though to a much less extent. The parent thought that if there was any thing wrong with that tooth it must be very slight decay, and he thought "filing would be all the tooth required." The deep-seated cavity found to exist in the one tooth, made us apprehensive as to the nature of the decay in the other if it really existed at all, and we determined to use the *drill* first. By the use of a sharp chisel we made a point for the drill in the enamel on the masticatory surface, as near to the approximal edge as was convenient to be done. The drill passed through solid enamel at least one *twelfth* of an inch, at which depth we found decay existing. We excavated and chisseled with very little difficulty to the depth of an eighth of an inch, or more, following the decay in the direction of the pulp cavity. The decayed portions removed were at first whitish and crumbly, but at the bottom of the cavity it assumed a bright, mahogany color and became tough and gristly. The adjoining bicuspid was unaffected; and the enamel on the approximal surface of the affected molar was very slightly decayed. We cut away the enamel, however, down to the gum or nearly so. A good sized cavity was formed which we filled with gold and dismissed the patient.

Now by "probing" we might have detected here a clear case of "superficial decay," which could have been removed with the file!

The "drill," however, laid open the obscure and extensive evil existing, and proper treatment was readily indicated, and the proper operation most effectually performed.

"PRAY FOR ME."

There are two senses in which this very pretty little request is understood—the great majority of those making the request use it in the little sense. The exception in this, like most questions bearing upon our whole natures, is to understand and use it in the great sense.

In the first place, the very language is that of dependence or a sense of defficiency—need—in a word, something less than repletion or sufficiency. A state of attainment below our conceptions of completeness or competency. Something short of ability to answer our desire, to fully symbolize our ideal in the outward responsibilities and activities of life. Clearly teaching us that our hearts *must* first *conceive* before our hands *can* execute any work worthy the ambition of a human being.

In professional life there is a time and circumstance of being begotten, gestated, developed and born, all prior to the exercise of any thing that can be reckoned as matter of volition or duty upon the part of the individual. And not only so, but so far from our taking *any* responsibility in any of these minor deal conditions, they take place in absolute independence of our volition, for they are the points at which the forces upon which we are dependent culminate, and thus *produce* us professionally just as the creative and procreative forces *precede* and bring us *forth* naturally.

The how of all this would take the life-time of honest, earnest observation to elucidate in detail so as to sway the whole in any sense worthy of being termed *conviction.*

But we can not at first span the greatest extent of the most gigantic hand, let us not *refuse* to measure the pretty little span that can easily be effected with our chubby, infant thumb and finger, that if we will by quick succession of efforts, we may compass the whole distance that the great hand of the Brobdignag makes at *once*, in a much less space of time than would seem possible to the lazy objector who stands dreading to make any effort to advance for fear that he should fail.

In professional begetting, we have made patent to our consciousness the programme of natural begetting, &c., &c.

Now let us look it steadily in the front and see what it teaches.

1st. Our consciousness tells us that a new vibration has taken place among the elements of our perceptions, and arrests our attention to "divine" whither it tends. The exact direction, does not in an instant indicate clearly what ultimately will be settled upon, for the reason that the motions play about centers like circular waves in a pool, highly disturbed by a small body having been dropped into it. But keep up the closest watch and presently you will perceive that this first pebble was only "*avante courier*," to the corps that was to follow, and in due time indicate not only direction but every other specificity of the (to us) new individuality—circle or cycle of individuals, that the forces, part of which we ourselves are, were about bringing into the field of activities of the plane on which we stand.

At this point a fine opportunity is afforded to dilate fully upon the laws of living beings, but the flow of thoughts too abstruse for most minds to catch, must be checked and come more at the clearly defined; therefore let me say—our profession then has been begotten, gestated and born, as a distinct body. But its parts like those of the community of the race, are still in all these states or stages of *progress* or *regress*. Let us say that it has head, heart and lungs, hands—as necessary elements of its body proper. Instruments, tools and things may represent the means by which to handle principles and modes to useful ends.

That all this may be effected, this giant baby must be developed: which simply means that it must aggregate to itself the necessary constituents capable of nourishing it. No pabulum has as yet been found, chemically fitted, analytically to feed it up to a higher point than barely to enable it to use the surplus of elemental principles lodged in its tissues, by loss of its weight: thus living or rather languishing on its own substance, at the expense of size and weight; a condition only desirable as a compromise between immediate death and growth—in the hope that the disintegrating force shall have spent itself by the time a food properly combined of nutritious and effete substances so alternated as to afford the requisite stimulus, and at the same time present the analytical elements of growth to the organism has been secured. Laying us under the necessity of being always supplied with suitable at least, if not the most desirable preparations of these various elemental substances—food.

This prepares the way for me to say that fine thinking must first be fine feeding—as necessarily as fine workers must first be fine and analytical thinkers; demonstrating the close relation there exists between doing—working—and the high etherealism of the finest thought.

We are too prone to stand out against our highest interests by taking sides and debating every subject that is presented to us, at all touching upon the source of our thoughts; apparently determined to "account" for every thing that bubbles up in our hearts,—(showing us how imprisoned we are in a mere *secular* "commercialism" not having patience nor power to study out the time and only profitable "commerce" of heart and brain). Giving it a place in our old musty desks, to be sure the best we may have for the present for it, rather than simply to let some one who claims to have seen more and traveled farther than the masses, present us with something, give it a name and put it in an appropriate place; so that we could test by observation the fitness of the arrangement.

The first approach to the explanation of thought is clearest shown on the electrical plane of existences; to understand which in any satisfactory sense we must fulfill a few necessary conditions. These must be observed either by design or by fortuity, and noted in their proper time and place, to constitute them land marks by which to work out our problem.

If by accident—long intervals or short may intervene in the items, the very irregularity of which will complicate and render them less useful for our purpose ; but better, much better have even these than none. If by design—let competent observers project their schemes never so wisely, each one will have ample opportunity to find fault, if not in the profession and exercise of that necessary element of all scientific research—*patience.*

Let us state a few facts bearing upon the point, under what circumstances the highest manifestations of the power of thought have displayed themselves. (*a*) In healthy persons, an empty or nearly empty stomach is a requisite of brilliant thought. (*b*) Etherially charged brain produces a very high mental stasis (instances of intoxication prove this). (*c*) Electrically charged brain eliminates high-toned and clearly defined thought. (*d*) *Fine* organizations eliminate the clearest thoughts in *elevated* places and *empty* stomachs, and will always have the power to catch and retain thought in a greater degree if they live regularly, are cleanly in personal habit, indulge much in a prayerful state of mind, never cut and but seldom trim hair or beard, and live much in the open air and seclude themselves from society a part of each day, for the exercise of mentally digesting and arranging what the mentals have gathered; exercise here as elsewhere is the law of *complete* development.

Very many who value themselves upon their genius and mental ability, have scouted the idea that a person can perform a work better under the conditions named than without their presence. But here as elsewhere the difference is more in the words used to convey the fact than the fact itself. For instance, some of the finest artists have the reputation of being any thing but men of prayer. Now let us see if they have not really prayed often and long, "with their all of desire," for certain attainments by the closest attention to what to them seemed the power to convey to them the capability to out-work their desires in their various departments? And rested not till they had produced by constant, earnest effort, in what was to their perception the best way, the work upon which their hearts had been set.

I do not say that a soul of genius can be satisfied with his productions, viewed in the light of his inmost conceptions of perfection. But I do mean to say his work does far surpass his who is the mere imitator of some one whom he looks up to as pattern; for the very reason that the desire of his soul is always leading him to surpass the outward and imperfect by working out the symbolism of the ideally perfect, that resides in the interior of all and any who have the slightest claim to "genius."

The genius represnts the Christian who prays for others as well as for himself; while the lame imitator personates him who has some one to do his praying for him, for which he is simple enough to give of his substance to sustain. As well might we entertain the proposition of some one to do our eating and breathing for us, and save us the trouble for a few shillings, in the foolish hope of flourishing in vigorous growth; the utter impossibility of which would soon be made patent in our death struggle. For *action* is the law not only of *life*, but particularly and peculiarly of *growth.* The great incubus that has rested down upon us is consequent upon bad or wrong teaching; the setting up of unutterable things and thus discouraging the mind in place of suggestively leading it forth a step at a time, till it culminates in unheard of strength and manly vigor and becomes in its turn the leader of others into new fields of profitable effort, demonstrating that beautiful saying, "there is that scattereth and yet increaseth"—joyfully leaving the bunk imitator to prove that other part of the saying, "and there is that withholdeth more than is meet—*but* it tendeth to poverty."

Every *act is* and ought to be considered a prayer to the power we pay homage to :—It matters not how undeveloped or cultivated soever we may be. Those who deny this are like the primaries in all departments ever are, merely echoing automatically the sounds that they hear, till by habit they acquire a use of the organs of voice to such degere, as to let the specific tone belonging to the individual manifest itself so clearly as to prove it to be a distinct and special one, the product of their own organism. The discovery of which, usually results in use to excess of the newly discovered power, like the boy with a new whistle piercing the ears of all in reach of its odiously shrill note. If you wish to test it, all you have to do is to suggest that there is some other note or instrument more to your taste. Then you will perceive that you are at once set down in his estimation as one having "no music in your soul," for which he in magnanimity is ready to pity you.

I could give examples of the various sorts of prayer, but you will perceive that to fill the programme it would involve the full catalogue of man's aims and ends, and hence I will instance but a few as textual references.

All who utter selfish prayers are praying in the little sense. While those who are broad enough in their petitions to reach the whole race—profession, nation, state, county or town ;—indicate a base broad enough to keep them from topping over for want of sustentation ; or ever being so circumstanced as not to be able to find a work to do, to further the interest of some of the departments recognized in their platform ; and thus utter their prayers in the great sense.

The specific reason for our being so careful how we let our aspirations escape us is, that we always in kind invite influences like the promptings within. For be it understood we are immersed in elemental influences that have a constant tendency to occupy and possess themselves of any unappropriated space in our mental receptacles. Therefore, it is of the highest importance for us to have all our powers exercised in the right direction early ; thus pre-occupying the ground with the good seed, that will inevitably be taken possession of by the seeds of tares and noxious plants as matters of necessity, if neglected.

Let us then, gentlemen of the profession, as earnest seekers for the highest excellence in our activities, always strive to do our best every time we attempt to put forth our hands to express our skill; and we shall soon be as some have been astonished at the rapid advancement we shall make as individuals, and the most useful of professions.

A highly learned teacher in our profession has asserted that "every one has a right to buy his knowledge by his experience"—I would rather say he commits a *wrong* to community and his own soul if he refuses the testimony of *competent* witnesses—who stand thick on every hand to lead him from his blindness and errors to the beautiful platform of unmistakable usefulness. If we let our light shine without unnecessary obstruction, there will not long be difference of opinion among those worthy to take rank, as competent first class operators and teachers. "Freely ye have received"—let it be the ambition of us all as "freely to give," imitating the divine plan, even to the unkind and the unthankful, for the good of the whole; that our profession may soon attain such elevation, that none other than first rate good men can be called to exercise its noble functions, viz:

"Redeeming us from the curse of broken law."

Mathematical modes of demonstration are best understood in the light of such trains of thought as the following:

All of A can not express nor constitute B. But some of the elements of the two are used in common to symbolize the idea desired to be expressed—the only reason of which is that the real worlds of thought are as yet not open to the common perception by any but symbolic means. The real worlds—worlds of ideas, are of necessity spherical—spheres—and perfect in whole or in part as certain as the grains of seeds composing the full measure are perfect in specific form or developmental force. So that it does not matter at what point on a sphere the advent is made, it is capable of being a sure starting point from which to survey and calculate relations. This must be so or the pupil could never transcend the master, into whose trammels he might have fallen. But that pupil can transcend masters in the aggregative great sense, nothing can possibly be more absurd. For as in procreation many elements that do not inform us from whence they come, go to make up the whole of our individuality; so many entities and mental existences inflow to our personal perceptions that may never have existed or been awaked to action, in the consciousness of those we call our teachers or masters, but were aggregated from the spheres for the first in our own cases, without notifying us whether they were now really for the first time nucleated and tied down to symbolic harness to be driven by any one into whose hands the rein might by fortuity fall. So that each seat of affection is thrilled with pleasure when *it* first is cognizant of new ideas or combinations of ideas; thus constituting the highest inducement to cultivate such states of induction for the purpose of letting the light shine. It matters not to the soul made happy by the blessed presence of living thought and perception, whether that particular thought or vibration ever stirred or ever will stir any other soul, mind or spirit in the universe, so long as it has fulfilled its mission in his particular case, any more than the satiated and replete stomach cares to inquire how many appetites the elements composing the repast just finished, had ministered to in the great round of aggregation and segregation of elemental changing substances. The *waste* of one form of living manifestation being but the constituent part of *food* to some other in the grand scale of the round of being,—exhibiting economy in the great sense, where narrowness of interpretation, could see nothing but the most improvident lavishment on one part and the most unjust and absolute prohibition and exaction on the other—to make up the balance.

Thus mathematical modes of teaching show us clearly that if there were no sources for advancement for us but those imprisoned in the means and minds of professional teachers, that we should soon be at a loss for even the ordinary degree of intelligence. For it can not be denied that all such teachers are liable to forget, and are not at all times in possession, in the communicative sense, of all that they may have been taught or known. So that thus limited we must retrograde in the main, instead of advancing; to avoid which we must keep our minds open toward the educating and growing, so that we may be less impoverished with our forgettings. And let the legitimate exchange of the various riches of our mental stores, advance from point to principle, forgetting *detail* but gaining the real elements of all specialities in the attainment of those that belong in the great sense to the whole of our world of scientific labor.

The great lesson to be drawn from our experience in life is, that we should not let the mode, manner or law of procedure, that properly belongs to some of the branches of scientific research, so overslaugh and possess the mind as to destroy the ability to look at the universe in any but a one-sided direction, and with the oblique light necessary to the clear definition of some of the less important, though beautiful, markings of her exterior.

Specialities and specialists are of course very desirable in their place, and to such an extent has this possessed the minds of men in the various departments of scientific research that, the pure mathematician on the discovery of a new object, puts his mathematical calipers upon it, and at once, as he thinks, determines its exact mark; mathematically exact value and sets it down as irrefragable testimony as to the value of that particular object, regardless of the class, order, general species or variety to which it belonged. Let this suffice as to the method of dealing with specialities by specialists; and come at once to the statement, that all things in time, place and action, will be fitting or unfitting, complete or deficient, just in the ratio of the ability of the observer to comprehend their *relations*. Therefore, if we would make real advancement, we must treat of things in the *various* lights of science, before we are entitled to mark, number and put them away for use. Not caring to follow the beaten track of faculties of institutions of learning, and publishers of serial works or rather *books*, by saying to the pupil, this belongs to Prof. so and so's chair, or this will be elucidated and dwelt demonstratably upon in such and such a work we are about to or have just issued for the benefit of all inquirers, at the very reasonable price of —— dollars and —— cents. But in the exercise of our free franchise, take up and dwell upon any and all subjects that may present themselves; even at the risk of being dubbed desultory—fanatical—enthusiastic—or any other odious name that the dullard imprisoned in his teachings may see fit to apply to us; and reap the rich harvest of freshness that springs up in a fertile soil, not trodden to mud, dust or filth, by the ease-loving, swinish old fogy that stands at the crossing to deter all from any but *his* particular way to be traveled, assuming that all that is worth knowing or professing is in the line of observation pioneered by our venerable antecedents, of whom he is the only legitimate representative. And lest we deny it produces an old piece of mummy cloth or other equally attractive piece of stuff marked with Hieroglyphical characters he can not decipher, and in triumph says: "there is my diploma."

This last remark will be of use to us if we look at it a moment, for it exhibits to us the object of obtaining a diploma that really is too often met. Mere show, instead of patiently plodding or moving with celerity along the pathway of investigation, for what knowledge is to be gained of a useful nature, rather than the mere credit of having paid so much money and spent so much time in such and such an institution, in consideration of which none but *men* can refuse to sign, seal and deliver the parchment, setting forth the qualities supposed to constitute worthiness for such a mark of fellowship. Nay, gentlemen, the real diploma resides in heads, hearts and hands, of all who are in any sense qualified for any true and pleasant fellowship on this or any plane of social duty. General truths, covering all special truth or truths of detail, to fully set forth which would require more time, ability and patience than can be commanded on this occasion. O.

VALEDICTORY ADDRESS,

TO THE GRADUATES OF THE OHIO COLLEGE OF DENTAL SURGERY.

BY J. F. JONSTON, D. D. S.

GENTLEMEN :—In accepting the invitation of the Faculty of this College to deliver to you as is the custom, an address, you can easily imagine that it would be with pleasureable emotions, when I tell you that just seven years ago I was placed as you are now. You can easily realize that my being here to-night would naturally awaken and bring vividly and fresh to my memory many pleasing incidents connected with the days of my pupilage in this institution—added to which the feelings of gratitude and pride, at the unmistakable evidence on the part of my professional parent, that her son has not-been forgotten, but on the contrary is still remembered as entitled to her affections and esteem, would certainly be sufficient cause for feelings of exultation. I, on my part, am free to acknowlege that whatever of success I have met with professionally, is traceable most clearly to my own mind, to the thorough course of instruction and the good advice at parting she gave me. I am proud to acknowledge myself one of her sons, and the pleasure of congratulating and welcoming other young members of her family is enhanced on returning home, as I feel myself to-night, and find that age has but added strength and beauty to her. She is prosperous and has decked herself in an entirely new dress; but although that in which she nursed me has been cast off, there are enough remnants left to remind me of what she was, in the familiar faces of some of her pioneer professors, and how pleasant it is to find them. May they long be found at her side! But to drop the figure, gentlemen, we can not look with other feelings than those of pride upon this edifice, which is indeed an improvement upon that which occupied this ground when I was here a pupil; though that was a very comfortable old tenement, which at the time we thought answered very well, and which now we can not think of but with reverence. But this building indicative as it is of the healthy advancement of dental science and enterprise in the west, is especially worthy of your regard as being the only college owned by the profession, if I am correctly informed, in the world. It should be your aim now that you have a life interest in it, a sort of relationship in fact, to send your pupils to its support. The Ohio College of Dental Surgery must continue to flourish many, many years!

Having, gentlemen, been cut loose from the "leading strings" for the past seven years, in which time I have been floundering my way down life's stream, with nothing but my profession to steer by, I feel that I may with some propriety venture to offer to you who are just embarking, such advice as may be of advantage to guide you in a correct professional course—that at least may enable you the more easily to avoid the sand bars and difficult passages, that without a chart or a good pilot, so many are unable to pass, and either abandon the tortuous yet beautiful stream that leads to wealth and fame altogether, or eke out a miserable existence, stranded, when only half way. To be ambitious to excel in your calling, the desire to be popular as an operator, and to have the entire confidence of the community in which you reside, are feelings natural to every gentleman, and are when properly exhibited commendable traits of character. That we all possess them more or less, I fully believe. The poet has beautifully said with reference to this trait, (but I fear I can not do him justice as I quote from memory,) that—

> "The proud to gain it toils on toils endure,
> The modest shun it, but to make it sure;
> On globes and sceptres, nor on thrones it swells
> And trims the mid-night lamp in college cells;
> Nor ends with death, but nods in sable plumes,
> Adorns the hearse, and flutters on the tombs."

It is in the way these peculiarities are manifested, that good or bad results follow. That they are the natural incentives to all efforts when man is otherwise unembarrassed, no one doubts. You have given us an example of it in your praiseworthy endeavors to secure the triumph which is yours to-night. But aside from this natural love, this yearning for a respectable position, the pecuniary advantages arising therefrom will add material to this often latent, but never dying fire, and make it blaze forth in some form in all—that it may shed its genial warmth and light, in its most approved form in you, is the desire not only of the Faculty of this College, but of every true man, and none more than he who addresses you. To-night, perhaps, witnesses the last general meeting of the Graduating Class and Professors of this College for the present session, and to-night also severs the relationship of teacher and pupil. The feelings of both parties, no doubt, partake both of pleasure and pain. Pleasure that the work is accomplished—pain that friends must part, and pleasant associations be broken up. From the intimate acquaintance and relationship as your advisers and instructors, it is but natural that the Faculty should feel a deep interest in you, and having vouched for you to the public, they can not be other than anxious as to your course as professional men. They can do no more, however, than trust to your high sense of honor, which will make you especially careful not to be guilty of any professional delinquency that will in any wise compromise the character, or bring reproach upon, the institution whose highest honors you have received.

You must be conscious, gentlemen, that this night will be remembered, whilst your memory serves you, as the event of your life. From to-night you will date the beginning of your professional career, and scarcely a day will pass whilst in practice, but something will occur that will carry your thoughts rapidly back to your college days. Now the anxiety of passing creditably this ordeal is over, the channel of your thoughts is changed, and will naturally run into the future. The office arrangements, the location, and the numerous necessaries to equip you for the "battle of life," which is now about to commence with you in earnest, and the best and safest way to fight it, will be the all absorbing thought. And you will fully realize, now that you are separated from your instructors, and have received the significant appendage to your name of D. D. S., being thereby placed on terms of professional equality (as far as a title goes) with all in the profession—that you have suddenly emerged from the enquiring and attentive pupil, into the thoughtful, self-reliant, active practitioner. The change will appear greater to you than you can at this moment conceive; but when your first patient presents him or herself the full force of it will then burst upon you. The responsibility you have assumed and the impression you will have made toward your future success, can not be other than food for serious thought, until you are well established, and your reputation is a fixed fact. And to this end you must press determinedly on; let not the "grass grow under your feet" but "catch each transient hour," and "improve each moment as it flies," bearing in mind that

> "Life is a short summer, man a flower,
> He dies, alas, how soon he dies."

The profession you have chosen, is certainly not the most easy one, taken in any sense. Indeed to my mind, it is in several respects more difficult and arduous than others. Whilst in law or divinity if a man is a fair scholar, a clear reasoner and something of an orator, and he is industrious and studious, he is looked upon, and will pass for, more than ordinary. The same abilities in the practice of medicine, without the oratory, will enable the possessor to pass well. But in the practice of dentisty, you will find that it requires, not only constant toil, but you will have many weary and anxious days and nights—there are no two sides to our cases, no excuses for defeats. We bring in, it is true, always a bill of costs sometimes pretty heavy ones, but they are generally cheerfully paid, because our cases are, indeed *have to be*, more or less successes. At least they must always come up to what you promise your patient, but allow me to say just here, that it is by far the best plan not to raise their expectations too high. It is always more gratifying to have your operations prove more satisfactory than anticipated. To continue then, dentistry demands most of the requirements for other professions and in addition a large stock of firmness, gentleness, skillfulness, mechanism, science, art, and patience; of the latter we may safely say, *more* than any other. You, no doubt, have heard it remarked that, if Job had been a dentist, we should not have had so favorable an account of him. I am inclined to believe it. Every thing connected with the practice requiring the greatest nicety, the most perfect accuracy, the mind must of necessity constantly dwell upon that in which you are engaged. The work of many hours is totally ruined by one thoughtless or unlucky tap, and the result is disappointment to your patient and loss to yourself. A careless thrust may entirely unnerve your patient, ruin a frail tooth, and your reputation also, with the individual and his or her friends. In fact I know of no calling or profession, that requires the constant use of *all* the faculties so continuously as does dentistry. To keep up with the age you must patronize the literature of your profession, read and experiment, for "something new starts every day." You must watch and be active; for although you are graduates, I trust you will not soon entertain the idea, that you know enough. In a profession that is advancing as does ours, the oldest in it can find something to learn. If, therefore, your ambition leads you to attempt to reach its very summit, you will find it can only be attained through legitimate, industrious and persistent means. Give it this and many of the annoyances disappear, and the ascent appears less difficult. But the lazy, unscrupulous man will be in constant trouble, he will resort to all kinds of plans and experiments, to find an *easy* way, and will at last be found when old age shall have overtaken him, stumbling among the the many obstacles at the very foot of the hill, having with his increased burden of years even less courage to proceed than ever. Death finally calls and compels him to relinquish his but half finished task for ever. But it is nevertheless encouraging to think, that notwithstanding the difficulties named, the science of dentistry is so far perfected that the operations of a thoroughly competent man, can readily be distinguished from those of the pretender, and therefore it is that such an one will succeed, and be appreciated.

Dentistry, like the other professions, is becoming quite full, and the public are gradually learning how to choose the most reliable men from among its numerous applicants for their patronage. Every day we see the evidence, that more than ever practitioners must stand upon their merits, or fall. The public no longer takes a man for a dentist because he so advertises himself, they want at least to have some such evidence as you now hold, to even induce them to think of you as such. And I give you fair warning, gentlemen, that unless you are extremely lucky, and your lots be cast in very favorable places, where aching teeth abound, and where jaws are wide open, empty and begging to be filled with the "pearly gems," where there is no competition, and where in consequence your services will be in great demand, (and of such a locality I can not advise you, for I acknowledge myself ignorant of such a spot,) you must make up your mind to do a very small business at first. Practice will come in gradually. People are in these times very cautious; they are slow to entrust those valuable and truly sensitive organs, to the tender mercies of one, whose skill has not been tried. Indeed, you will be led to think your bell will never ring for a summons for professional services, whilst you will entertain no fears of the landlord ringing *punctually* at the end of the month. And even when a call shall have been made, for a tooth to be filled or even extracted, you will be conjecturing as to what kind of an impression you have made, whether the person will speak well or ill of you, and so on, with alternate hopes and fears, clouds and sunshine, will your practice be made and established. These difficulties which are attendant upon all professions when practiced upon correct principles, have frequently led young men to enter ours, (supposing it most available) and resort to empirical means to get at once into business. Having entered upon it for the sole purpose of making money rapidly and easily, and without any regard to those principles of honor, that any and every *man* should hold beyond prize, they rush head-long into excuses, stratagems and devices, to gammon a too credulous public. Succeeding, perhaps, for a short time, they continue their bombast until the merest booby will understand them. Their gasconade being unsubstantiated by good works, their utter unreliableness becomes patent—and from that time their reputation is made; and go where they may, some one will "turn up" who has seen them before, and will blast their prospects of humbugging by uttering for them too soon the word quack. But you, gentlemen, can be of good cheer. Your coming here is evidence to the public of your desire to be thoroughly qualified to discharge the duties of a practitioner, honestly, faithfully and skillfully. That you did not skulk your duties as students, your diploma corroborates. You now have but to temper your zeal with prudence to succeed; and yet I could not conscientiously leave this part of my subject without urging upon you the absolute necessity of continued study and close observation. By so doing you will certainly improve, and in every succeeding operation you will discover that it has been performed with more ease and is yet far better than the preceding one. The artist—

let him be sculptor, painter, or what not, is ever trying to improve on former efforts, knowing well that he can arrive at eminence only by so doing, and that his works being likely to meet the eye of other artists, their criticisms will make either for or against him. How much greater is the necessity for untiring effort on the part of the dentist. His operations are equally liable to be judged by his professional brethren, and their verdict will tend either to build him up or cast him down, and what is of greater consequence, if the operation is not properly performed, it is a sting to his conscience, for his patient must suffer either pain or loss through his defects. Either contingency could not be other than deploring. For these reasons I have many nights lain awake studying how best to succeed in difficult cases. Yes, and must acknowledge to having prayed to Him, who is the giver of all good, to strengthen my understanding, and endow me with the necessary faculties to discharge my duties as an efficient practitioner.

I lay no claims, gentlemen, to unusual honesty, or *any* piety, (and yet I can not but believe that "Prayer ardent opens heaven")—it was most likely because I had been taught that "honesty is the best policy." But when a young man is thrown entirely upon his own resources, having nothing save his profession to rely upon, nothing being left after College expenses are paid, for a "rainy day; feeling his entire wealth consisted in his profession and a good character, to sustain which in this unfriendly world, money enough to pay promptly all debts contracted is indispensable, to obtain which he must have business; and when he has determined (as I trust you have) to succeed, if at all, by honorable means only, and when he shall have married (as all men of taste will) a beautiful, tender and loving girl, and desires, as all who are worthy of the name of men should, to keep her comfortable and happy; when he shall have learned that the public will sift him thoroughly and discover the amount of chaff in him; and when, further, he will have learned that there are among his competitors men who are in every respect as professional men his equals, (for thanks to such institutions as this, good dentists are not so scarce as they were previous to their existence); and with a perfect knowledge of the fact that defective dental operations, if he were content to make such, can not long remain undiscovered,—it would be strange if a man should not pray to be made equal to the task. Gentlemen, I do not allude to these things to discourage you. I speak of them merely to show that difficulties beset this, as other professions, and that the pretender can not long successfully combat with the competent man. With you, who have qualified yourselves, they should be regarded as words of encouragement. "Put your best foot foremost," and patiently and faithfully adhere to the correct principles of practice as taught you here, and you will not only conquer all obstacles, but earn a reputation that your children (after you have long since "gone to your rest,") will speak of with pride. As before intimated, I entertain no fears for you. You have honorably won your position to-night, which is proof enough that you are not of that make that will yield in future contests.

Now, having pointed out some of the difficulties to be met, it would, perhaps, be nothing more than proper I should call your attention to certain necessary precautions in a more specific manner than I have done. I shall not, however, dwell for a moment upon methods of practice—of that you have heard in these halls from more competent sources, but shall invite your attention to those matters appertaining more especially to your deportment as professional men, and those little attentions to your person and apartments, that, added to a thorough knowledge of performing operations, give popularity and character to yourself and establishment. First, then, as to advice, that being an article very freely bestowed upon dental patients. Did you ever hear of any person being influential in teaching doctrines they themselves totally disregarded? Must it not, then, be acknowledged that advice from a dentist to his patient with reference to absolute cleanliness being indispensable to preserve the teeth, comes with exceedingly bad grace from one who makes of his buccal cavity a receptacle for pig-tail tobacco and other vile preparations of " the weed," and of his teeth, a patent self-adjustable portable mill to grind it, and who seldom or never uses the brush he so learnedly recommends? Do you think such advice would be heeded by children, who would be most benefited? It is true that his bringing himself in such close contact might so disgust sensitive people, that they would be especially careful to avoid being in such a condition themselves; but it would certainly be vastly more agreeable to teach them by an example of the opposite condition of things, to at least have that decent regard for the feelings of others that should prompt every operator, who has the least self-respect, to keep his teeth and breath, as well as his finger nails and hands, unexceptionably pure.

I knew a dentist, who, I am happy to say, is not a graduate of this or any other dental College, who chewed " the weed " incessantly, and if perchance he had but just taken a " chaw " when a patient might happen to enter, he was much too careful to throw it away; but would stow it with great skill, into either the cavity of an old molar, or that of his cheek. Having an unexpected call to fill a tooth for a young lady, after having but just bitten off a piece of Cavendish, he hastily made the usual deposition of it, and proceeded to business. The tooth being rather a difficult one to fill, he in a great effort relaxed his hold upon the tobacco, which gracefully rolled out into her wide-open mouth. The spitting and spattering on her part, and the apologizing on his, can be imagined, but not described. This same individual was innocent of ever having provided himself with (to him) those superfluous articles termed napkins. If he found a plug was going to be submerged, and he thought it might be injured thereby, his yellow " nose wiper " was at once brought to the rescue. In the recital of this case, I have not drawn upon my imagination. The facts were given me respectively by a relative of the individual, and a young lady who was an eye-witness. The result of such unwarrantable neglect of the rules of common decency, caused him to suppose he was not properly appreciated, and he has accordingly long since retired from the profession to the more congenial pursuits of a farmer, where his peculiar tastes can be indulged with less unpleasant consequences.

I believe I never had but one patient that would have felt *comfortable* under such treatment as here spoken of; and he presented himself about two months since. He was from a neighboring village, and had been attending the University. He desired his teeth thorougly examined, and such as needed filling, filled. Wishing to have a very critical examination made, he remarked that his teeth were not clean enough ; he had been in the habit of using his finger, but thought it did not answer for a case like the present ; therefore, would I lend him a tooth-brush ? I acknowledge this tried my nerves, for although I had heard of the demand for the public tooth-brush, on the steamboat, I never expected to see a live specimen of the same sort in my office. I handed him a glass of water, and apologized for not being provided for such emergencies, as I best could. On speaking of this occurrence to a friend, he remarked that he knew a dentist, who always gave his patients' teeth a vigorous brushing, with a brush he kept for that purpose, well covered with his double back-action tooth powder, as a finishing process after removing tartar. I would advise you not to adopt this mode of practice. On the contrary, your forceps and all other instruments, in short, every thing that comes in contact with the teeth, should be well washed after using, and every particle of blood or other substance that could taint or soil them, be carefully removed. Attention to this matter costs very little trouble, preserves your instruments in good order, and adds very materially to the popularity of your establishment. For as has been shown in the rather aggravated cases spoken of, it is quite too much neglected. An apparatus for washing the hands, well supplied with water, soap and towels, should be sufficiently near, that the patient waiting for your services may be assured that the very necessary act of ablution has been attended to; for judging others' feelings by my own, I should think they would become quite nervous if they thought it had not. And yet I have known dentists who will operate all day without thinking of it; but they never had that kind of practice which I should consider desirable.

To be able to receive your patients in such a manner as to make them feel as soon as possible on friendly terms, and thus prepare them for those more intimate relations, when they take the chair, and further, to be able to drive off in a measure the pain and other annoyances of an operation, by diverting the mind with conversation, if you find it agreeable, as it most frequently will be, if properly chosen, and there is not *too much* of it,—are accomplishments you should cultivate. The advantage, then, of employing your leisure hours, not only in reading up your dental literature, but the current events of the day, and such standard works as your time will permit of, is apparent. And it is not only necessary to make you agreeable in your office, but out of it also. The dentist of our days has so far advanced in the public estimation as a professional man (and we may again thank our Colleges for it), that he is regarded as a worthy companion, and associate for any class of society. And when we reflect upon the influence of wealth and titles, even in this free republic, it is no mean compliment.

I advise you to cultivate friendly relations with your competitors, that is, if they are not quacks. If they are, have the courage to say so, and avoid them; but never let the "green-eyed monster" occasion you to speak ill of or treat disrespectfully a worthy man. Unfriendly relations with such are always supposed to arise from jealousy, and they no doubt most frequently do. But this, besides doing no good (rather an injury) is an evidence of weakness; indeed, shows clearly a want of confidence in yourself, otherwise you could have but little in a professional way, to be jealous of. Neither will it advantage you to speak ill of another's operations. The person having come to you, the former dentist still being comeatable, is enough to show that dissatisfaction exists. You have but to see that what you may do is well done, otherwise, the compliment might be returned.

Your relationship to the medical profession should be a matter worthy of thought and attention. It has been too much the custom, at least in so far as my observation has been extended, for the dentist to yield entirely too much to the dictation of medical men. It is quite frequently the case that the services of the one are required conjointly with those of the other; and while I would have you refrain from putting on professional airs, or using with too much precision professional terms, or making in the least any pedantic display, I would have you feel sufficiently conscious of your ability, to decide for yourself what the nature of your services shall be, in so far as the mode of operating is concerned, at all events. Sometimes a medical man will show considerable jealousy towards the dentist, and to convince the patient, that needs the services of both, that no one knows any thing but himself, will dictate with as much impudence as ignorance, what the dentist shall do. If he is right in his directions, of course follow them, if he is wrong, operate only in conformity with your judgment, or give up the case. For if you obeyed his instructions, and any unpleasant consequences followed, such a one would not fail to try to saddle you with the blame and responsibility. Be then especially careful not to *infringe* upon their rights, and always maintain your own.

It is due, however, to candor and justice to say, that while you will undoubtedly find in the mother profession many such ignoramuses as just alluded to, yet the great majority are quite the reverse. They are gentlemen, who will respect your rights, and in proportion to their own attainments, will the more cheerfully acknowledge yours. Indeed, the best physicians almost invariably turn over to the dentists all cases that properly come under their supervision. Neither are they slow in acknowledging their superior knowledge of such cases, not only to them personally, but to their patients. As an example of this, the best surgeon, perhaps, in the city I live in, was called about midnight, four months since, to attend a woman who had been having teeth extracted at my office the afternoon previous, and who was bleeding severely. The Doctor applied some tannin on a roll of linen, tied up her jaws, and told her to keep still as possible until morning, and he thought all would be right. When morning came, however, she was yet bleeding, and together with her friends, had become much alarmed, and sent early for me. On learning that the case was under treatment by the Doctor, I of course refused to interfere, telling them he was able (which was a fact) to attend to it. Shortly after the Doctor called, and requested me to take the case in hand, remarking that I was more familiar with such difficulties, and could, therefore, manipulate to better advantage, and he had so informed the patient. I then felt at liberty to attend to it, which I did, and sent the lady home (she lived some forty miles away) the next day to her husband, who being a physician, on learning of the trouble, she since informed me, gave her a scolding for not knowing enough to send for me at first. This is not an uncommon case. I dare say the like has occurred to others. It only shows the views of practical medical men in regard to this matter. Indeed, it is now regarded by all intelligent people to be just in as bad taste for a physician to practice any branch of dentistry, as it would be for a dentist to treat fevers. The public condemn them alike, and I have yet to see the man who succeeded well, who has attempted to practice the two together.

Gentlemen, you have the right to assume the position of master of your profession, and should do so, both in justice to yourselves and your Alma Mater, who has given you your credentials to-night so to do. And just in so far as you follow the teachings of that Book, which you have received with your Diploma, and "do unto others as you would they should do unto you," you will not overstep the bounds of propriety. And further, I indulge the hope that the time will arrive when the use of the letters D. D. S. in a professional sense will be as well and generally understood as are those of M. D., and that the public will be as anxious to find out whether a young dentist is a D. D. S., as they now generally are to learn if a physician is an M. D. And although I think it is in *very bad taste* for gentlemen to *parade* their titles before a community, yet I believe it to be the duty of graduates of all dental schools to use this abbreviation in advertising a card, which they can very easily do, without using the word dental, and still in an unassuming way very clearly indicate their business. Medical men consider it no disgrace, no breach of etiquette, to use the M. D., when entitled to it. Why should it be for us to use our D. D. S., under the same circumstances? The only objection ever urged is, that it is not understood. The plan I propose would *make* it understood, and we should soon see it classed among the abbreviations in the Spelling Book. If it is never to be understood, if it is to give no distinction, there is no use in having it. I, for my part, am quite as proud of my title as is the physician of his. It costs quite as much, and gives us quite as much trouble to obtain it, and it is one letter longer. I reiterate the opinion, that if all the graduates, and those who for good reasons have had the honor conferred, would use it, but *invariably with discretion*, the public will soon understand what it means, and use it to as great an extent in discriminating between reliable and unreliable practitioners, as they undoubtedly do among physicians. When this can be attained, as I believe it may, all genuine men will rejoice, and none more than those old pioneers, who have never enjoyed the privileges that are now yours, and yet have labored unceasingly to this end. If you could but realize the difficulties they encountered, even the scoffing and jeers of many who supposed they were practicing almost a vagrant's calling, you could not be otherwise than grateful to them and such institutions as this, for raising your profession up to the standard of the oldest, in point of respectability and learning. And I think further, that no young man that enters the profession hereafter, should feel content, or think of practicing longer than he can possibly help, without having obtained, as you have done, a diploma. There is no longer any excuse for such.

With reference to your office, furniture, instruments, etc., etc , I can not advise you, other than to obtain under all circumstances those that are neat and most useful. Further than that is a matter of taste, in which you will be governed by your own opinions, the community you practice in, and more especially the condition of your port-monaie. Poor Richard says, " Ere fancy you consult, consult your purse." The advice is pertinent.

But I weary you, and must close. I rejoice with you, that your most ardent wish has been realized. You have passed your examination, and have graduated with honor, and now hold in your possession the attestation of the Faculty of the Ohio College of Dental Surgeons to that effect. And now I have the pleasure of congratulating you, upon your triumphal entry into the ranks of the legitimate practitioner of dentistry, and with no other emotions than those of pleasure, extend to you in their behalf, the right hand of fellowship. Be but as zealous in the faithful discharge of your duties as professional men, as you have been in your studies to obtain to-night's distinction, and the additional diploma of " Well done thou good and faithful servant," will be yours.

REPLY.

BY L. H. HENDRICK, M. D., D. D. S.

Honored Sir, and respected Professors: In accepting your farewell greeting as a retiring class of students, and in receiving your right hand of fellowship, cordially welcoming this graduating class into the opening door of the honorable profession of Dental Surgery, I speak the language of the hearts of my associates when I say, Thanks, honored Faculty, for the memorable words of counsel you have just addressed us, and for that consistent course of admonition and instruction, which like the gentle guardians' care, have been nursing and nurturing us for transplantation into the world's field, for the bearing of fruit.

As true sons of the Ohio Dental College, in obedience to the wisest philosophy in which we have been instructed, I shall not occupy this consecrated hour in extended remarks, for we, as a class, subscribe to the sentiment. "Do much, say little, hear much, reflect upon the counsel of superiors; distrust our own opinions, and value the advice of the experienced." We are of your family and kindred; the initials of the profession, we trust, have been worthily attached to our names, for one and all we are going forth to the discharge of our duties, impressed with a deep sense of reverence for our instructors and for our Alma Mater.

We, however, have made up our minds to go into this "terra incognita" of the professional world with an exuberant flow of spirits. We see how successful our seniors have been, we know what youth can attain, we feel emulous to take a part in the tug of life, not as a holiday sport, but as a grand reality. We have got the clue from you; we have noted the finger-board guide you have set up, and are inspired by your example, to be students in the arts and mysteries of meeting the demands of the hour in the battle of life.

We have a professional pride to take your parchments into circles where a good name can be attained and maintained.

We shake your hand at parting, but we advise you that the thrill of sympathy—the contact of palms has betokened, will enliven each of your pupils to an energy corresponding to our natural gifts, our culture and the whispering monitor of college remembrance, and incite us to win our way to positions that are reserved for the new classes of graduates of this Dental College. We hope to honor in our words and actions our Alma Mater.

We have been told by D'Israeli that the history of heroes is the history of youth ; that the greatest captains of ancient times both conquered Italy at five and twenty; that the work of the world has been done mainly by young brains. We know what the claims of the west are on all her citizens; we appreciate what the spirit of the age demands of the professional man, and we ask here on the threshold of the College door, while looking around on the associates we leave and back with affection to our sage instructors, to say, that, in catching a glimpse through the opening door of duty, we pledge you, one and all, Professors of the Ohio College of Dental Surgery, that we will devote our whole energies to expand into active life the power you have aided in developing, and will with our own students, and by all other means honor and aid the noble institution whose zeal we have attesting our bachelor degree in Dental science. We love our profession and will avail ourselves of the practical advice you have given as to our relation and communications with our patrons. We speak confidently of having abundance of these, for we intend to deserve them.

Fellow-Students, of the graduating class, to you I know not what to say; but five short months ago we met, many of us as strangers, within these walls as students, that our minds might be furnished with the acquisitions needful to an honorable prosecution of the practice of Dental Surgery; hand in hand we have gone together through the arduous, anxious period of our pupilage, and to-night our friends have been called together to witness the receiving of our rewards, in the conferring the highest honors of a profession that deservedly ranks in usefulness, dignity and responsibility, with the most ennobling of the arts cultivated by or practiced among men.

And now, my beloved class-mates, here we are, in the presence of our instructors and the friends of the College; here our eyes are to behold for the last time the present scene. Eye to eye, no more are we to behold each other's lineaments, and when we grasp each others hands and tear ourselves from each other's embrace, we will experience that which is the heart's business, an experience designed for our instruction, for our humiliation and exaltation. Prudence, kindly, has placed us for a while in competition, apposition, and opposition. We know each other's strength; we know our mutual faults; we have been schooled in the higher branches of the knowledge of man, and now are crystalizing into tear-drops, the concentration of feelings which struggle at our hearts—we have met and learned together, we now part to learn and act apart—we bear imprinted on our hearts each other's image, the lovable and good survives—we look now on each other as at other parts of ourselves, going out into diverse parts of the world, but all the while being of one body. Here, too, the Dental College turns on a single pivot, the shaft on which our several pulleys are attached.

Brethren and class-mates, let us be brethren and class-mates in heart wherever dispersed. Let us be good men and good dentists. Let us honor our instructors and be linked in our destiny with the welfare of our beloved college.

"Let us boldly strive and win,—
Ours the work to plan and do
Till the nations gathered in,
Claim the race and victory too.

"Ever looking upward higher,
Nerve the soul for any strife;
To the distant goal aspire
Ne'er give over while there's life.

"Let us nobly strive to win,
Nobly plan and nobly do;
Till the harvest gathered in,
Ours the crown and victory too."

Fellow-student, the class now parting with you passes into the practical department, and you are left with our instructors in the theoretical department. Your morning salutations, your cheerful looks, your generous acts are to be hereafter for others. We cherish remembrance of you, and take the step that you are preparing to take—advance couriers, we herald your coming, and while clearing many snags and prongs out of the way before you, we hope to welcome you with your budget of improved formulas and patterns, into the great laboratory of life, where we trust you will find us up to our eyes in work, in model offices, in neat and tasty array, making our customers happy and ourselves worthily rich.

Worthy Professors—fathers in the profession, we give you our adieus—we honor you now, we hope to give you honor in the honor we hope to attain in our practice. Farewell, we go to further study, to fields of research, in which your instructions have fitted us to engage. May you live long in peace and prosperity. May your mid-day be unclouded, and your evening calm. May the hand of destiny deal gently with you. May the just rewards of science and virtue weave a chaplet for your brows, bright and unfading as the beams of light. May heaven bless the schemes of honest enterprise in which you have enlisted, and may you reap the plentiful harvest of honor, fame and emolument which you so richly deserve. Class-Mates, Fellow-Students, Professors—farewell.

"O! who that from his friends must sever
For long, long years, perhaps forever,
Would wish to fly without possessing
A parting look, a parting blessing;
Though in that moment is combined
All that can agonize the mind;

Though lips can not express their love,
Though tears may then refuse to flow;
Though anguish not to be expressed
Nearly o'er whelms the throbing breast?
Yet when the trying hours are o'er,
And friendly forms are seen no more—
When one fond look in view is sought
There's consolation in the thought
That the last look, the parting sigh,
Recorded their fidelity.
The silent pressure of the hand,
Which friends so well can understand—
The words, the looks, which though they fill
Our eyes with tears, are comfort still."

Proceedings of Societies.

DISCUSSIONS OF THE MICHIGAN STATE DENTAL ASSOCIATION.

The above named association met at Firemen's Hall, in the city of Detroit, on Tuesday evening, January 10th, 1860.

After reading the minutes of last meeting, election of officers for the ensuing year and election of new members, the President elect, Dr. C. S. Chittenden, of Hamilton, C. W., delivered a short and appropriate address, thanking the Association for the honor conferred, encouraging them to still greater efforts in the good work of diffusing useful knowledge, and, by frequent social intercourse, to break down the professional prejudices, and thereby unite and harmonize for the elevation of the profession.

Dr. White read an able essay on professional intercourse and practice, which was requested for publication, but we have not been supplied with a copy.

Dr. Atkinson, of Cleveland, Ohio, made some very appropriate remarks, drawing parallels between the proper spherer and relative positions of the Medical and Dental professions; stating that the Medical profession have always stood aloof and placed a barrier between themselves and the Dentist, but at last the Dental profession have succeeded in pecking a hole through the wall so that the divine light may pass through; at last the curtain is removed and the divine light permitted to shine in upon the soul.

It has been common to call the Dentist a "Tooth Doctor;" there is no more propriety in this, than being called a doctor of any other specialty. If we take the tooth we also take the soul of it. Knowledge is *divine*; it is not yours, nor mine, nor does it belong to any one in particular but to God, —it is his—and he diffuses it to all who will honestly and in truth receive it. We have no right to claim any thing as our own; but when a new thought strikes us, let us say: "Freely have I received and freely will I give."

Physicians presume that dentists have stolen from them their profession, like an old maid, whose affections have gone out and finding nothing to cling to have returned into the heart and dried up. Physicians have themselves stolen every thing. The old Africans, if alive, could tell us things we never dreamed of. Let us be honest examples, nor claim that which is not ours, but freely give credit to those who have more knowledge than ourselves. Every thing in the earthy sphere are aggregates of humanity and have an elective affinity; every thing has in it imprisoned something to enrich us. If we should eat an entire ox we would probably feed the ox instead of being fed, but we cut it in pieces and are nourished thereby,—we can not aggregate to ourselves life principles without death to something else.

Take an apple, bite it, and at the moment it rubs upon the teeth and the saliva flows upon it, the life of the apple is destroyed and we are nourished.

We should be examples to our patients as we are to our children, who asking for a penny to get candy, we give it and direct them to get such as has no color; we do so to gratify the child and thus gratify ourselves, but find he is not satisfied. You refuse to give more, having a higher appreciation of the child's good than it has of itself. We should be examples in cleanliness, in eating, and in the care of our teeth. No *dirty* man can be in affinity with the *divine*. According to Scripture each of us is of more value than many sparrows. If we could have hold of every man and woman who are about to have a child, we would produce *perfect* specimens of humanity, and in two generations would have all in harmony.

To be *men* we must be well *begotten*, well *gestated* and well *born*. There are positive and negative forces in life; if we are pure males we are purely positive; if we are pure females we are purely negative. Every science has its center from which all light emanates; our profession is the center of all sciences. If we were perfect we would have wings and soar through space just as our thoughts do; this is stong language but true. Paul was a good man but had to be knocked down before he could comprehend the truth.

A paper from Dr. Bancroft on Difficult Dentition was read and ordered to be published. (See Original Communications.)

FIRST SUBJECT.—*Difficult Dentition.*

Dr. CAHOON thought the subject too broad. A child is brought to the dentist, teeth not developed in time on account of deficiency of phosphate of lime; if we give good food, good air and keep clean, we will have good teeth.

Dr. BENEDICT is willing to agree that if we all lived first as we should, there would be no difficulty. No need of lawyers, physicians or dentists, but such is not the case, and these do exist and are useful in assisting each other.

We must take things as we find them. Nature will *generally* do the work of dentition, but not always; she sometimes needs assistance.

Oft times the mother presents herself to the dentist with a child, whose gums are swollen and inflamed. What shall we do in such cases? Some would use the lancet, others not; has children himself, and one thing is always done. Where the gums show symptoms of inflammation and swelling, rubs gently with the finger several times a day, in consequence of which the inflammation subsides after rubbing a few times; in removing the finger the child will itself grasp and replace it in the mouth. The presumption is that the teeth are pressed into the gum and the inflammation is dissipated. Would not lance the gums in any case except one of great suffering, or where the child is likely to have spasms. Mild physic will sometimes relieve, but in severe cases would cut through the gums to the teeth, which would relieve the pressure and consequent inflammation.

Dr. PORTER does not consider that it is the amount of blood removed that relieves, but the cutting gives relief from pressure; so marked is this that children will sometimes open the mouth and desire the cutting.

Dr. ATKINSON: The proper ratio between loss and supply of the tissues is not kept up. The absorbing power may be restored, and the tooth irrupted without difficulty.

Never cut with the expectation of irrupting the teeth until you see the white, transparent appearance of the tooth, or a dark congested appearance. In such cases always cut, and would rather cut ten times when not needed, than to fail to cut once when it is required. It is a false theory that a cicatrix is more difficult to absolve than healthy tissue.

Dr. WHITE: The management of children during dentition is very important; it is painful to see how foolishly and injudiciously children are generally treated; it will tell through life on the destiny of the child. There is much fault in regard to food during dentition.

Dr. FARMER: Youngest member of the profession by odds, don't see the propriety of going back so far; we can't go about and instruct people when about to commit a certain act, to bear certain things in mind, that they may produce children with good teeth. Likes the remarks of Dr. Atkinson. When a white spot is observed on the coming tooth, or a dark purple tinge, would not hesitate to cut; but prefers to do so with a finger or thumb nail, as the bleeding is more easily stopped.

It is conceded that impressions can be made on a child in utero as early as the fourth month; if it can be done at the fourth month it can be done earlier; but we have to do with cases as they are presented, and not with fancies.

Dr. CHITTENDEN has had a little difficulty in one family. We have but little to do with the matter when the mother is healthy. The dentist is not called upon till there is some difficulty. Thinks the difficulty occurs from an insufficiency of calcareous elements in the tooth. Is a Homœopathist and employs no other physician. When a child is suffering intensely, and is in danger of going into convulsions, recommends the use of Cal. Carb. from the use of which relief is rapidly obtained; in similar cases use the same remedy; children will readily take it, it being pleasant. When white, or purple spots appear on the tooth, would cut.

SECOND SUBJECT.—*Effects of Diseased Teeth and Gums on the General Health.*

Dr. ATKINSON: Two cases, Mrs. S. of Newark, Ohio, for years under necessity, as she thought, of wearing a seaton in her side, for supposed consumption. While she could keep up discharge from seaton, improved. Seaton dried up, increased discharge from lungs; meantime she met another lady, also wearing a seaton. One of them had the toothache, both have lived in same way by advice of physician Met Mrs. S. and told her if she would have her mouth cleansed out there would be no necessity for seatons; after some delay she had her teeth extracted, and mouth cleansed and a set of artificial teeth. Seaton dried up, and discharge from lungs ceased, and following up the case for several years, the patient became entirely well.

Mrs. I. similar, only several molar teeth in the mouth. Lady stooped and could not walk without assistance. She became as well and strong as her neighbor, not suspected of having consumption.

Dr. CAHOON: Remembers a similar but not so aggravated a case, under care of physician. Was called in to examine, found several roots of teeth quite covered up, and diseased antrum, removed roots, and with but little medication got well.

Dr. PORTER. Neighbor very unwell, going about with over-coat all summer, unable to do any thing and supposed to be in consumption. Came and requested a tooth extracted. Removed several and patient was soon restored to perfect health. Another similar, with throat very much inflamed.

Dr. MANSFIELD. Lady patient suffered severely for several months, face swollen and tied up all the time. Suffered much pain, teeth decayed and considerable absorbtion; in extracting two came out together, bringing with them a large piece of the process.

Dr. ATKINSON wished to be correct in terms; it could not be the process unless secondary growth. Has a case in which three teeth joined together by an osseous union; the periosteum is the bone making organ. Was requested to describe the condition of anchyllosis and necrosis, which he did in his usual clear, minute, vigorous and scientific manner.

Dr. CHITTENDEN has had several cases. Rev. Dr. G.'s wife supposed to be in consumption, catamenial discharges ceased; all teeth loose except two or three; the lady insisted upon having all the teeth out. Doctor was much affected in contemplation of the loss of his wife. Dr. C. thought it not worth while to put in an artificial denture, but the lady insisted, it was done, and in less than six months was as healthy as any body.

Dr. FARMER: Lady had teeth filled and in about six weeks after returned in great distress, desiring to have the teeth extracted; told her she must go elsewhere, teeth all right, and would not take them out. After some inquiry discovered her condition; prescribed some simple remedies, which brought on catamenial discharge, and sent her home next day. She came in as bright as a dollar. The difficulty was simply suppression of menses.

Another case of same kind; was sent for in great haste. Great suffering and swelling, applied leeches, and a dose of citrate of magnesia, and administered the following prescription, which he considers of great value in such cases:

℞ Syrup Rhei—℥ ij
Sulph. Quinine—℈ ij
Fowler's Solution—Gtts. xlv.
Dose—1 teaspoonful three times a day.

Extracted tooth at the first call and urgent solicitation of patient; never will do so again.

Dr. CAHOON also described two or three very interesting cases so nearly like the above, that a special description is not necessary.

Dr. BENEDICT also reported an aggravated case in which nine teeth were removed; within four weeks after the operation the general health was entirely restored. Another case in which the lady was sick and in bed: examined the teeth, found the mouth full of old roots; recommended extraction and medical treatment. Next day removed the roots, and the day following cleansed the teeth, since which time the health has rapidly improved.

THIRD SUBJECT.—*The Proper Treatment of Diseased Gums.*

Dr. WHITING finds diseased gums to proceed generally from diseased roots and tartar. Sometimes from scrofulous and syphilitic diathesis. When from the former cause, remove the roots and tartar and the mouth will get well itself, when from the latter cause, constitutional treatment is required.

Dr. CAHOON finds uncleanliness the general cause of disease; uncleanliness generates tartar, which is insinuated under the free margin of the gums, causes absorption. Sometimes the acids and fluids of the mouth will so irritate and inflame as to keep the gums sore and diseased all the time. Tincture of Rhatany is probably the best remedy as a lotion, after the removal of the tartar or diseased roots. Though one may tell another what should be done, every one must see the case and judge for himself; if the cause is constitutional, then constitutional treatment must be resorted to; Tincture of arnica is also a good and efficient local remedy.

Dr. PORTER agrees with Dr. Cahoon, ascertain and remove the cause and the case is easily cured; uses a great variety of remedies; tincture of rhatany, arnica, creosote, chlorid of zinc, etc.

Dr. Farmer wishes to know what should be done where the festoons of the gums shoot up like so many parasites, in a high state of inflammation.

Dr. MANSFIELD says cut them off.

Dr. CAHOON applies nitrate of silver; they *must* be removed; if this does not bring them down then cuts them off.

Dr. ATKINSON, at considerable length, entered into the pathological and physiological condition generally; deem such, as fungus growth, and with a sharp knife lops them off; if in haste, use styptics, after that creosote and chlorid of zinc; creosote first, if cut off from all but two remedies, would select creosote and chlorid of zinc, *give me these.*

Dr. BENEDICT followed in a few very able remarks, on the same subject, with dissertation on the use of the tooth-brush, advancing some valuable hints, which he has promised to write out, and furnish for publication in the *Register.*

FOURTH SUBJECT.—*Mechanical Dentistry.*

Dr. PERINE describes the process of Dr. C. Sill, of Pittsburg, for obtaining a correct metallic cast, by taking the impression in plaster. He places upon a stone to draw off moisture, while the metal is melting. Surround the impression with a metal ring, stir the metal well and pour carefully into the impression. Babbit metal is best. Dr. P. also recommends a solution of silicate of soda, for repairing plaster casts, and for filling up between the points of teeth, in rubber work, to prevent the rubber from forcing and showing between the teeth. Gutta Percha was also suggested by Dr. Atkinson, and commented upon by several members; in this it is necessary for the plaster to be poured immediately on the removal of the impression from the mouth.

Dr. PORTER exhibited a cast of a case of artificial palate; plate was fitted, and speech restored to great extent. This was a very interesting and difficult case.

Dr. ESTILE, of Toledo, Ohio, sent in some specimens of metal for plates and substitute for silver, being of much finer texture and resisting the action of acids and secretions of the mouth. On one of the strips pure copper was melted, and on the other a piece of a Spanish twenty-five cent piece, without change of color in the metals.

Dr. E. also stated that he had it in the mouth for several months, wearing bright and clear. Dr. E. proposes to manufacture it and supply the profession at about two dollars and a half per ounce.

MISCELLANEOUS.

Dr. ATKINSON, on the use of the mallet, says: If you want to save teeth, save pain and save time, use the mallet; and the time is not far distant when every dentist will use it. He then gave a detailed account of how he came to use it, his success and experience.

PROCEEDINGS OF PENNSYLVANIA SOCIETY OF DENTAL SURGERY.

Messrs. Editors:—There was a profitable meeting of this Association held last evening, a brief report of which I offer you in place of, and of more interest than, my usual letter.

Dr. McQuillen offered a very interesting discussion on the subject of the absorption of the fangs of the deciduous teeth, his theory being, a diminution or entire withdrawal of the suply of nutrition, occasioned by the demand for and in the growth of the permanent teeth. He illustrated by copious references to the law of waste and supply in the animal economy, and of the cessation of a function when no longer required. The argument was able and comprehensive, and I trust will be given in *extenso* in some of our journals.

Other gentlemen spoke to the question, some contending that absorbtion was due to *pressure* as well as defective nutrition, and citing cases where the deciduous teeth had remained and were useful in the absence of the permanent teeth, they never having been developed. After a pretty full discussion of this interesting topic

Dr. J. M. Harris introduced the subject of "*accidents in dental practice—how to meet and treat them*," in which he enumerated Luxation of the lower jaw—Syncope—the propriety of operating for females in a delicate condition—Fractures and Hemorrhage.

Of the first topic, numerous and some humorous examples were given,—the fright of the operator with his first case and his bungling attempts to reduce it, to the imminent danger of the mutilation of his thumbs, were ludicrous in the extreme. The usual means employed to reduce luxation, and the necessity for supporting the lower jaw while operating for such persons as were pre-disposed to such accidents, were alluded to, also the causes for such tendency, etc., when the second topic, *Synocope*, received attention, and the ordinary treatment,—the administration of a few drops of aqua ammonia in water and a recumbent posture, with plenty of fresh air— was suggested; and the too prevalent habit of passing strong ammonia under the nose and dashing cold water in the face, very properly condemned as not only useless but sometimes dangerous.

On the topic of the treatment of females when in a certain condition, there was some difference of opinion, some contending that the extraction of a painful tooth is less hurtful than the continual suffering from tooth-ache, while others recommended palliatives, such as protecting the offending tooth by a cap placed upon an adjoining tooth, thus preventing contact on the occlusion of the jaws; and such other temporizing measures as are ordinarily resorted to in such cases.

Fractures was next considered. Fracture of the alveolus was thought a trifling matter but that it was important to remove all detached bone and other substance.

Dr. FITCH here cited a case of the fracture of the jaw and gave his treatment—the employment of a platina plate, adapted as well as was possible under the circumstances, with fine soft platina wire attachments to various teeth, thus drawing the fractured ends in position, and by which a cure was affected.

During the discussion on Hemorrhage, Dr. Garretson (who treated this subject as well as others, at considerable length) alluded to the employment of *cobwebs*,—which he had suggested some years ago in a communication to the *Dental News Letter*,—combined with some powerful astringent and styptic, as being an admirable remedy, also other remedies, such as a preparation of iron, the actual cautery, etc., and that if all failed and syncope ensued, that then the hemorrhage would generally be arrested as a sequence of fainting.

I attempt, in the above, but a mere synopsis of the discussions, and which is penned from memory alone, therefore my excuse for any imperfections. Yours, O. U. C.

PHILA., Feb. 15, 1860.

Selections.

NEW YORK ACADEMY OF MEDICINE.

Condensed from Phonographic Reports for the Medical and Surgical Reporter.

DISCUSSION ON ANÆSTHETICS.

Dr. Kissam related his experience with the two principal anæsthetics, sulphuric ether and chloroform, as employed in surgery; he gave preference to chloroform, but recommended it to be used with great caution.

Dr. Reese coincided with Dr. Kissam. As to the different action which the two articles possess, he would state that he was in the habit of using chloroform in puerperal convulsions, with good effect, while ether could not be used in this disease, because it rather increased, if any thing, the tendency to convulsions. In reference to chloroform, he had noticed that the Paris correspondent of the *New York Times*, who is a physician, had stated that the use of this remedy had been lately attended with exceedingly fatal results in the Parisian hospitals. It was Trousseau, he thought, who had introduced and sanctioned the administration of chloroform by an apparatus in which the inhalation is made through one nostril—the other nostril being left open for the reception of atmospheric air. Great stress is laid upon the fact, that chloroform, as thus administered through the open nostril, and in such a way as to admit the atmosphere, prevents any injurious results from the accumlative action of the remedy, which are so often alarming. He had never in his own hands had a case in which the chloroform was attended by a fatal result, or even approached to fatality. He always introduced the remedy very gradually, withdrawing it occasionally, and never carrying it so far as to produce profound stertor or coma, which in no case, where the anæsthetic was resorted to, he deemed it necessary to produce.

Dr. Squib had used chloroform for the past five or six years in many cases, perhaps as often as a hundred times, for various affections, and had never seen it followed by disastrous results. He is not in the habit of giving it very profusely, very often giving hardly enough to deprive the patient of sensibility or ordinary sensation. Used in this manner it has proved a safe agent in his hands. He had given it as long as 45—50 minutes at a time, without producing any dangerous effects. The danger from its use he considers to arise chiefly from the rash administration of it, being given in many cases so as to prevent the admission of air. When mixed with air it is certainly far more safe than when that due admixture of air is not given.

The President, Dr. Watson, stated that he would like to have the distinction pointed out between the results of the use of ether and of chloroform.

Dr. MINOR: During eight years experience in the administration of anæsthetics, in the hospital to which he was attached, the free admission of atmospheric air with the anæsthic agent has always been sucured, and he had never yet met with more than one case, which appeared in his opinion to be dangerous. In that instance there was suspended animation for five or ten minutes; the patient, however, finally recovered. As a general rule, the agent is administered according to the plan laid down by Dr. Metcalfe, some years ago, in a paper which was read before the Academy. In some cases Dr. M. had seen chloroform administered, by young gentlemen, rather in a careless manner; as they become interested in the operation, they are apt to apply the sponge too closely to the patient's nostrils, and thus prevent, to a great degree, the admixture of air with the vapor of the anæsthetic. He believed that where chloroform is given with due care, and the quantity regulated according to the peculiarities of the case, there will be comparatively little danger following its use; when, on the other hand, it is carelessly or ignorantly administered, it is a dangerous remedy, and is not unfrequently followed by fatal results; in fact, he believed that most of the fatal cases can be traced to a careless administration of the remedy. These remarks, of course, referred to chloroform alone. In many instances he had used a mixture of chloroform and ether, the per centage of the latter, however, being so small, that as far as the ultimate effects were concerned, it might be considered as chloroform.

Dr. PEASLEE remarked that in regard to the danger accompanying the administration of chloroform, a distinction must be made between its use in obstetric and in surgical practice. In the former, it is comparatively safe, because the paroxysm and labor pains react, to a certain extent, against the influence of the anæsthetic, while it is much more fatal in surgical practice. In regard to the two agents, he preferred ether; he had commenced with it, and used it up to the present time. In the first few trials, unpleasant effects were occasionally seen, which Dr. Peaslee now feels certain to have been due to the manner in which it was administered. His own experience coincided with the results of Dr. Snow's experiments, and convinced him that the safety of the administration of this agent depends *cæteris paribus*, upon the proper amount of atmospheric air being given with it. With this precaution, Dr. P. has never seen it followed by any unpleasant consequences whatever, and furthermore, he had never known, seen, read or heard of a case, where it was followed by unpleasant effects for more than a few hours. In some cases, he had given as much as two pounds of ether, and not unfrequently one pound. Chloroform he used with the utmost care, and took the precaution, mentioned by Dr. Snow, never to give it for more than twenty minutes at a time. In one case, however, even with these precautions, respiration was interrupted for three or four minutes, and for a time he thought that the patient was dead, and it was only by establishing artificial respiration that recovery finally took place.

Dr. O'Reily related four cases in which chloroform was administered, in all of which the most alarming symptoms took place suddenly, although the agent had been administered with care. By most energetic means, however, they were all restored.

Dr. Dalton made the following remarks:

Of course, Mr. President, I have very little experience with regard to the effects of these two agents upon the human subject, although I had the pleasure of witnessing the first operation in which ether was used as an anæsthetic agent. In my own practice, if you may call it such, the patients have been principally animals. I presume, however, that there is very little difference in their mode of operation on animals and on men. When I commenced, I, of course, used ether; but as ether requires to be given in a very large bulk, I soon found it very inconvenient, and commenced using chloroform in its stead, and found it very much more pleasant for myself, because it was more easily administered to the animals, and I continued to use it for a certain time. Very soon, however, I found that the animals would occasionally die, which I attributed to some imperfection in the mode of administering the agent. I continued the practice, but still the accident referred to would occasionally occur. Not to take up too much time in details, the simple fact is, that, at the end of six months, from the time I commenced its administration I abandoned it. Sometime afterward I again had occasion to use it; I gave it, but found that it was followed by the same results. Since that time I have given it up altogether, and instead of it I have used sulphuric ether. I think I may say, without exaggeration, that I am thoroughly convinced that there is a radical difference in the danger following the administration of these two substances. I am sure that chloroform is more dangerous to animals, at least; whether it is so in man or not, I do not know.

In order to understand this subject thoroughly, it is necessary that we should endeavor to ascertain the manner in which death results in the fatal cases. Death sometimes follows without any evident or traceable cause. It may occur from ether or chloroform by a very careless administration, or from an impurity of the article, provided that the patient breathes nothing but the vapor of the ether or the chloroform. Now in these cases, death is not attributable to the ether or chloroform; it is simply due to the want of atmospheric air. If you give a man a grain of opium and then stop his mouth and nostrils, he will of course die; but certainly not from the opium, but from the want of atmospheric air. The same is true of the administration of ether or chloroform. Therefore the first thing to be attended to, when we wish to prevent a fatal issue from the administration of these substances is to see that they are given mixed with a sufficient quantity of atmospheric air, and then one cause of death would be excluded.

Sometimes, however, even with all our precaution, we find the respiration and the heart stopping suddenly and the patient dead. It is an interesting question to know whether or not death is produced by the *stoppage of respiration* or *of the heart*. My own belief is, that in the case of chloroform, death is produced by paralysis of the heart. My reasons for this view are two-fold.

In the first place, if you moderately etherize or chloroformize an ainmal, carrying it carefully just up to the point of insensibility, and then open the walls of the chest as quickly as possible, the lungs of course will collapse and respiration be at an end, but the heart will continue to beat for a considerable length of time. If, on the other hand, you etherize or chloroformize an animal until respiration is stopped, and then open the chest, you will find the heart still beating, but very feebly. I have several times performed the following experiment, namely: to etherize an animal moderately, but enough to deprive it of all sensibility, then immediately the chest was opened and the animal laid aside; another animal was then etherized until death was produced, and on immediately opening the chest the heart was found still, while in the first animal it was yet beating. So far as this goes it tends to show, with a great deal of conclusiveness, that the fatal result is produced by a direct paralysis of the heart.

In experimenting thus with animals, I have had occasion to notice very frequently, when the anæsthetic is carried only to the stoppage of respiration, that the animals usually recover, and expect with confidence that respiration will begin again; but if, on noticing that the respiration is stopped, I find the heart itself still, I know that the animal is dead, although I have noticed, after the circulation is at an end, that it is sometimes re-established in a certain manner which is entirely characteristic, and being once seen, is very readily recognized. This is, however, entirely unavailing; the animal never recovers.

In my own experience, then, fatal results have followed both ether and chloroform. I have killed dogs and cats with ether and chloroform, but I am obliged to take a great deal of pains to produce this result with ether, whereas death often follows the use of chloroform, notwithstanding the best precautions. It has been said, that when death occurs from the administration of chloroform in the human subject, that it is attributable to giving it too rapidly or too abundantly; but while there are undoubtedly many cases in which injurious results follow from the non-admission of a sufficient amount of air, still I am of the opinion that the injurious or fatal results can not always be attributed to that cause, for the reason that these accidents have occurred in the practice of our best and most careful surgeons, who invariably exhibit this remedy with the utmost caution, and yet when every thing appears to be going on well, the patient suddenly dies. So far, we know of no precaution which will prevent the occasional occurrence of this accident.

Dr. O'Reily gave his theory of the fatal action of chloroform. In his opinion, the anæsthetic acted primarily upon the ganglionic nervous system, by which the proper process of endosmose and exosmose in the lungs is disturbed, and the air cells in the lungs are prevented from duly decarbonizing the blood.

Dr. Buck related the history of the death from chloroform which occured several years ago at the New York Hospital. The patient in that case was a perfectly healthy man. Two weeks before the unfortunate accident occurred, he had taken chloroform, which produced no disagreeable result whatever, neither were any greater precautions taken at this time than when the fatal issue occurred. In his case there was nothing whatever to forbid the use of this agent. Neither can the unfortunate result be attributed to the impurity of the chloroform, for the same article had been administered a day before to one of the patients with the very best effect. In this instance the quantity was by no means large, certainly less than a drachm. The accident occured very suddenly indeed. Dr. B. had barely time to order the assistant to bring a wet cloth, and then felt of his pulse, but it was gone. He did not know how any greater precautions could have been used than had been in this case.

Dr. Batchelder: Had tried experiments with chloroform upon himself frequently, by inhaling it through one nostril while the other was stopped, and then watching the effects closely. At first a singing in the head and ears were felt, then flashings of light before the eyes, assuming various shapes, were seen, and a prickling sensation was felt in the fingers. If carried beyond this point it begins to affect the voluntary muscles, so much so that in some instances he would have fallen down if he had not stopped inhaling the agent. In relation to the manner in which it produces death, he agreed entirely with Dr. Dalton's views. He thought that the heart did not become paralyzed until all the voluntary muscles become so. He had seen but two cases in which the agent produced alarming symptoms. They were both surgical, and were rescued by inducing artificial respiration.

Dr. Gardner regarded the mimimum dose of 20 drops, as generally stated in books, as too large. In one case he had seen a sufficient anæsthetic effect produced to allow the painless extraction of a tooth, by the inhalation of only five drops of chloroform.

Dr. McNulty observed that from the turn which the discussion had taken one would draw the inference that sulphuric ether was a perfectly harmless and safe agent, and could be administered almost *ad libitum.* He certainly had that impression very strongly. Last week, however, he had occasion to administer sulphuric ether to his own brother, and of course all possible precautions were used. He was put in the recumbent posture, and an abundance of atmospheric air was secured with the vapor inhaled. For the first five minutes the proportion of ether to air was certainly not more than 1 in 20, perhaps only 1 in 50. From that time its administration was carried on very gradually, and he was apparently coming under the influence of the anæsthetic very well indeed. Suddenly, when looking at his face, he was struck with its remarkable pallor. On feeling the pulse it was found a mere flutter; the respiration had also ceased. The sponge was immediately taken away, and Marshall Hall's ready method resorted to. The patient gradually came to, but did not fully recover until six hours afterward. This case, the Doctor remarked, has certainly shaken my confidence in the safety and harmlessness of this remedy, very much indeed.

The President, Dr. Watson, inquired of Dr. Dalton whether he had found ether *fail* to produce all the effects that can be wished for from chloroform.

Dr. Dalton: It has never failed in my hands. My experience would lead me to believe that it is capable of producing all the effects of chloroform.

* * *

Tests for the purity of Chloroform.—M. Berthe gives the following directions, in the *Moniteur des Hospitaux:*—Chloroform may contain chloride of elaidine, alcohol, various chlorides, amylic and methylic combinations, and aldehyde. By adding caustic potash to chloroform containing chloride of elaidine, the compound is transformed into chloride of acetyle, the fœtor of which is immediately noticed. In order to ascertain the presence of all the other compounds which may be mixed with the chloroform, especially alcoholic compounds, pound a small quantity of bichromate of potash in a little chloroform, and add to this mixture a few drops of sulphuric acid. If the chloroform is pure, a reddish-brown precipitate of chromic acid is formed; if not pure, the acid is reduced, whilst the precipitate, or sometimes the liquid itself, assumes a green color, dependent on the presence of the sesquioxide of chrome.

Correspondence.

Messrs. Editors:—For a number of years I've noticed many different accounts of hemorrhage and many different modes of treatment. In the last *Dental Journal* there is a letter from Dr. Harvey, which confirms me in my plan of treatment in professional cases of hemorrhage—an account of which I will give you and which you can insert in the *Register*, if you think it will benefit your readers

In 1855 I extracted for a lady the second bicuspid on left superior maxillary, which at the time passed off without any appearance of hemorrhage. All continued well for five days, at which time hemorrhage commenced and was suffered to continue for sixteen or eighteen hours before sending for assistance. On my arrival I found no time was to be lost, as a few hours would terminate her existence. I immediately applied a pill made of gum myrrh and tannin, made very stiff and rolled out to correspond in shape to the root of the tooth and forcing it into the orifice as tightly as possible, placing a pledget of cotton against it, directing the patient to close the mouth to keep it in place, which stopped the flow immediately. I am fully convinced profused cases of hemorrhage, from extracting teeth, must be stopped by pressure. I prefer the gum myrrh or gum kimo, as they will gradually dissolve and pass out—giving no trouble to remove. Believing this course to be the safest and most reliable, you may, if you think proper, give it a place in the *Register*.

Yours, truly, J. S. LINDSEY.

Frederick City, Feb. 13, 1860.

NOMENCLATURE OF DENTAL CARIES.

Messrs Taft and Watt, *Gentlemen :*—The action of *acids* has made dental caries *so* simple a pathological phenomenon, that authors now esteem all classification of the *thing* called caries as "unnecessary" incumbrances or meaningless epithets. "*Deep-seated, superficial,*" etc., etc., are all considered useless "appellations" by "Harris," who uses them no doubt, as he does the term "caries" itself, because "we know of no better names."

It would be a convenience, if no more, to have the "different stages" of caries *mapped out* and appropriately nomenclatured. In medicine this is the case in all local diseases. But in dentistry there is a meagerness in terms that is very often seriously felt. We have thought the *poverty* of our nomenclature of *caries of the teeth* should be removed by the *coining* of such terms as would be in accordance with the progress of the science. Some names have suggested themselves to our mind which we do not remember to have seen used or applied to designate the degrees or stages of this affection. They have some appropriateness; but whether they shall prove acceptable to the professional minds, is another question. No harm can result from suggesting them; and with your permission, we hereby present them to the consideration of our brethren.

We find medical names of local diseases are often derived from the names of the parts affected. For instance, *laryngitis*, or inflammation of the larynx, is termed *mucous* larygitis, when the mildest form of the disease exists; and it is called *sub-mucous* laryngitis (the form of which Washington died,) when the inflammation is of the highest grade, and the subjacent areolar tissue is involved.

Caries attacks or is found to exist in the *enamel* and the dentine. Taking these as the basis of a nomenclature for caries, the following *prefixes* will constitute words suggestive of the locality and stages of the affection. Caries is found existing *on* and *in* the body of the enamel and dentine.

First, then, *Epienamel* decay. This is caries of the simplest form existing, as the name indicates, on the external portion of the enamel. Second, *Intraenamel* decay. This would express a decay advanced *within* the substance of the enamel. Third, *Epidentinal* decay. This would designate caries limited to the external portions of the dentine. Fourth, *Intradentinal* decay. This would be the name for caries " deep-seated," or involving the *internal* parts of the dentinal tissue.

It is respectfully submitted, whether the above nomenclature be not more definite and significant than the terms, "*superficial*" and " *deep-seated*," which are the only " appellations " *we* " know of " whereby we " designate the different stages of the same disease ?"

The terms *epienamel*, *infradentinal*, and so forth, fix definately the stages of caries as it advances from tissue to tissue, or from the one part of the tissue to another part. It will be serviceable in diagnosing caries, causing the dentist to investigate the actual extent of the affection. The pathological phenomena presented or existing in an *epidentinal* form of caries might be different from those to be found when caries should be *infradentinal.* A soft texture invites the attack of caries and facilitates its triumphant progress, while a solid normal texture of the enamel and dentine offers a strong resistance, and struggles long with the " enemy !" The former structural condition would evidently pre-dispose to the speedy development of *infradentinal* caries—the whole body of the tissue becoming, at times, disorganized before the existence of the "insidious" disease becomes known! But the latter structural condition, namely, that of a solid or perfect description, would present generally decay in an *epienamel* or *epidentinal* form, in consequence of the resisting power inherent in the tissues attacked.

When decay is epienamel or epidentinal, and the texture of tissue is good or resistant, the operation of filing for these forms of caries would be, in the main, *safe* and "judicious." But when the structure is weak, soft, susceptable, offering little or no resistance to *carial* attacks, then even these mild forms of the disease would demand a different treatment—*perhaps, timely filling;* with a good deal of *nursing, afterward!*

A few days ago (10th instant,) we treated two central incisors for a lady *œt* 28. *Caries* existed on the mesial approximate sides. Enamel and dentine of good texture. *Left central;* decay existing only *epidentinally.* The resisting power of the tissue kept the disease partly at check. The two incisors touching, we filed away the entire *epidentinal decay*, leaving the tooth in a safe condition. The right central was affected to a greater degree. The caries was *infradentinal.* The affection traversed the epidentinal regions of the tissue, more than was deemed prudent to attempt to remove by *filing.* The tissue was penetrated two or more lines, at the greatest depths of the cavity. Had earlier application been made, this tooth would have been "a fit subject for the file;" but the disease had progressed too far. This tooth we filled with *gold.* Yours,

GEO. S. FOUKE.

Westminster, Md., Feb. 13, 1860.

Editorial.

CRYSTAL GOLD.

We have recently been using Crystal Gold from the manufactory of A. J. Watts, which works better than any of his make we have before seen. It is but due to say for the past two years we have used, but little crystal gold, having used the crystal gold foil, more than any thing else, or all other things together ; but for the past month we have been using the crystal gold ; the preparation we are using now is very tenacious and adhesive, and welds perfectly, when in a proper condition, and skillfully manipulated.

A. J. Watts is giving his entire attention to the production of crystal gold, and has brought it as near perfection as we can well conceive, yet we dare not say that much will not yet be accomplished. Ten years ago the man would have been thought insane who would have predicted the forthcoming of crystal gold. We have come to the conclusion to use the best of every thing in the practice of our profession that we can get, and expect something better in the future. T.

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Elements of Somatology : A Treatise on the General Properties of Matter. By Geo. Macintosh MacLean, M. D.

Those who wish to obtain clear ideas of the general properties of matter should by all means read this little book. It constitutes a valuable introduction to a course on either Natural Philosophy or Chemistry. The ideas are happily arranged, and clearly stated. The author is evidently at home on the subjects treated. Our space is limited or we would enumerate the contents of the work at some length. We trust that all our readers will treat themselves to a copy of the work. W.

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EXCAVATORS AND PLUGGERS.

The character of the operations upon the natural teeth, particularly filling, depends much upon the instruments employed—excavators and pluggers.

That there has always been a want of perfection in these instruments, has been the unpleasant experience of all good operators. There have been deficiencies in many particulars : in the quality of material used, in the manner in which it is wrought, in the form of the instruments, a want of delicacy and finish, temper, &c. These objections are almost wholly overcome in some instruments we have been using for three months past, made by an eastern manufacturer, and recently introduced to the notice of the profession.

These instruments, both excavators and pluggers, excel any thing we have before seen. They seem to be made of the best material, and have a superior temper ; they retain an edge much longer than any insruments we have ever used, they have a delicacy and perfection of form hitherto unattained. Of the plugging instruments there seems to be quite a good variety ; but of the excavators there are very few forms ; it is true those he has made are the most important, but there are some very valuable forms he has not among his stock, at least that we have seen, but we are assured he will soon introduce every valuable variety. No one who uses them will for any consideration be without them. The price is about double that of the ordinary instruments of the same kind, yet they are cheaper. T.

A NEW SOCIETY.

On the first Tuesday of January we had the pleasure of attending a meeting of the Mad River Valley Dental Association, at Xenia, Ohio. This is a society recently formed, but one which gives promise of much usefulness. It is composed of members of the profession from Bellefontaine, Liberty, Urbana, Springfield, Dayton and Xenia. These brethren have gone to work in earnest and with a determination to produce something valuable, and we have full confidence that it will be done. They all have a disposition to work ; and when that is the case, any society will be interesting and instructive. At the meeting which we attended, an interesting paper—which we hope to have for publication in the Register

—was read, on filling teeth; the subject was then taken up and discussed at some length, and several new ideas elicited.

After this a code of office ethics and fee bill was presented, both of which after due consideration were adopted. The code contains many excellent points, principles which should be adopted everywhere. The fee bill had an upward *tendency,* a fact which we are pleased to see, for when good prices are adopted, then time, energy and skill can be expended for the perfection of operations, and as a general thing, without it, will not be done.

Several new members were elected. All the members exhibited zeal; and we have no hesitation in saying, that much good will result from this society. It meets again in Urbana the first Thursday of April. T.

AROMATIC TINCTURE OF MYRRH.

This is a fine preparation of Tincture of Myrrh aromatized. It is a good preparation for treatment of the teeth and gums; it is far more pleasant than the simple tincture; it is applicable in all cases where myrrh is required; it is to some extent deordorizing, and will in many cases destroy the offensiveness of bad breath. It is a good preparation for the dentists' use. It is prepared by Suire, Eckstein & Co., of this city, is put up in four ounce bottles, and neatly labeled. It may be used to moisten the ordinary dentrifice, just before using with the brush. Those who have used it will not be without it. T.

SCIENTIFIC AMERICAN.

Hon. Judge Mason, of Iowa, who made himself so popular with the inventors of the country while he held the office of Commissioner of Patents has, we learn, associated himself with Mann & Co., at the Scientific American office, New York.

BUSINESS NOTICES.

VULCANITE, CORALITE, AMBER-BASE, ETC.

In the January No. of the Dental Register, notice was made of theVulcanite Patents; or rather the decision in favor of the American Hard-Rubber Company, against E. A. L. Roberts, in which I stated that I had taken some steps to investigate the matter, and might be able to say more in the February issue. I *never fail to redeem my promises.* In this case the promise was *contingent* upon whether I could obtain information of sufficient importance to place before the profession. I have not yet obtained such information, as it is a *slow* process to go behind the records of a court, in a distant city, for information.

In my recent travels, attending the meetings of Dental Associations in Indiana and Michigan, it was broadly hinted to me that letters had been issued from head quarters, to local and traveling agents of the American Hard-Rubber Co., bidding them be of good-cheer, that at the *earliest convenience* of those in power, quietus would be placed on "all infringers." Also, that in the next number of the New York Dental Journal, **TOLAND** would receive special attention, in an article giving, him "*fitts!!*" If I have been misinformed I ask the gentleman's pardon. If my friend, Dr. Perin, or his able assistand, Frank Norton, do themselves justice in this matter, it will well repay any Dentist a year's subscription to the New York Dental Journal, for the privilege of perusing this promised article alone, and as my friend Perine would say (if he were present,) it would then become necessary to subscribe for the REGISTER, to see the reply.

Well, there are, I believe, only five dental periodicals published in the United States, and if every dentist would take all of them, he would not have any *too much information*, but enough of jesting—to the subject, which is naturally a serious one, because I might pursue a course myself which I would not advise my friends to follow, because if evil results should follow, they would naturally blame me, as no one likes to find fault with himself.

I am daily in receipt of letters (sometimes a dozen per day,) making inquiry as to the kind of aparatus used for vulcanite, coralite, and amber bases, and whether either can be used without a right or license. In reply to all inquiries, let me say, I will give you all the facts as nearly as I am possessed of them and let you judge for yourselves.

If any errors of fact, or any erroneous deductions are made, it will be my greatest pleasure to correct them on satisfactory information. Let the American Hard-Rubber Company speak out, and inform the profession precisely what their patent does and does not cover, how far material can be manufactured, bought and sold, or used and vulcanized, where their rights begin and where they end.

A patent is in itself presumptive evidense of its validity, until legally contested and *proved* to be *invalid.* The American Hard-Rubber Co., have two patents, re-issued May 18. 1858, which expire May 6, 1865. One for the hard product, or compound of india rubber and allied gums—the other for the process for producing the said product or substances. They have also obtained an injunction against Roberts for compounding and vending materials, and a verdict for damages. This strengthens the presumptive validity of their patent. It is therefore clear that only one of two courses can be pursued by those who wish to use the process and materials. The first to purchase a license, and with it the privilege to purchase their material at three dollars per pound. The other is, to go to work without a license, and purchase materials at higher prices, viz : five, eight, ten or fourteen dollars per pound, and take the risk of prosecution. Whether they will be prosecuted will depend on three things :

1st. Whether it becomes known to the Hard-Rubber Company, that the person is vulcanizing, and whether they feel satisfied that they can prove an infringement.

2d. Whether the person vulcanizing becomes an obstacle to the American Hard-Rubber Company, in the sale of licenses.

3d. Whether the person is sufficiently responsible to have costs and damages or either collected from him.

The maunfacturers of the various compounds, such as "Wheat's Compounds," "Improved Gum," "Enameled Gum," &c., claim that their compounds are *not* an infringment upon the Good Year Patents, and parties using them not liable to prosecution, and there is strong presumptive evidence to this effect, in the fact that the above named materials are manufactured in the city of New York, in close proximity to the head-quarters of the American Hard-Rubber Company's agency, and yet these parties are *unmolested* by any legal process

If these are infringements, why are not they prosecuted, and enjoined from further manufacture and sale of materials.

THE AMBER BASE—comes next and claims *special* attention.

1st. By reason of the *color*, thereby being enabled so closely to represent the natural flesh color that gum teeth are not required, but *plain teeth* only are used.

2d. Being tasteless and free from odor, it is free from the objection frequently urged against the vulcanite base, viz : the disagreeable taste and odor arising from the combination of sulphur and india rubber.

3d. It is covered by four *distinct patents*, numbered and dated as follows : No. 19,916, April 13th, 1858 ; No. 24,544, June 28th, 1859 ; No. 24545, June 28th, 1859, and No. 25,957, November 1st, 1859. It will be seen that all except the first have been issued subsequent to the re-issue of the Good Year patent, and these cover every part of the process, viz : the compounding of materials, the use of *plaster moulds*, and process of curing or hardening or what is generally termed *vulcanizing, either by steam or any other kind of heat.* These patents must occupy precisely the same position as all others, viz : that the *patent is* in itself *presumptive evidence* of its *validity.* Why do the American Hard-Rubber Company not contest the validity of these patents. Dr. Diffenback has by circular and advertisements, *challenged* them to a *legal investigation.*

They probably reply that they do not claim *broadly* the manufacture of materials, but the constructing of plates or artificial denture therefrom. The fact is as before stated, they have two patents one for the *substance*, the other for the *process*, it is fair to infer that if they can not claim *broadly* the *process*, they can not on the same principle claim *broadly* the *substance* obtained by the said process.

Those who purchase the amber compound, have a right to use it free from any tax or license. Those who wish the *exclusive* use for cities, counties and States, will have to purchase rights.

I am frequently asked, "is the amber base all right, has it strength, durability, &c.?" I can only reply that it is comparatively new, and my experience is limited, but from what I have seen of it, I believe there is no important difference in strength and durability between it and the vulcanite base, and am inclined to believe it will prove all that is claimed for it.

The American Hard-Rubber Company, sell their office-rights, for the residue of the time for which the patent was granted, for *one hundred dollars.* I will be pleased to receive the orders of those who wish an office-right, which shall be supplied to them on the most *liberal* terms.

With these facts before them, the profession can easily determine whether to purchase a license and use the American Hard-Rubber Company's Gum, or whether they will purchase only the apparatus, and use the other materials. The vulcanizer or apparatus is precisely the same, whether for hard-rubber, coralite or amber. The process is also in all respects similar, except the degree of *heat* and length of *time* required to produce the hardening, which is different for the different gums.

I am prepared to supply all kinds of materials, tools and machines.

Amber Base, $14 per pound, vulcanizes at 310° Fahrenheit. There is also a new article at $4 per pound.

Enameled Gum......................	$10	These vulcanize in six hours at a heat of 300° Fahrenheit, first hour, gradually increased so that the last hour is at 340° F. These may also be vulcanized in 3 or 4 hours at 326° or 330 ° F.
1st Quality Pressed India Rubber	8	
1st " " Gutta Percha	8	
Wheat's Compound..................	8	
2d Qnality India Rubber,...............	5.	Vulcanizes in three hours, 300° F.

The above are all sold free of tariff to any person who wants them.

The American Hard-Rubber Company's Gum, $3 per pound. Vulcanizes in 3 hours at 300° F. This is sold only to those holding license from the company.

VULCANIZERS.—Cast Iron to be used on any common stove, with flasks and tools complete, $15.

Roberts' for gas or alcohol, for 2 pieces $18, 3 pieces, $20. *Flasks and tools extra.*

New improved Copper Machines, for 3 pieces with flasks and scrapers complete $25.

Extra Flasks, ordinary......	35 cents.	Improved.............	40 cents.
" Scrapers. "	25 "	"	35 "
Thermometers..			$3 00

Full and complete printed instructions will accompany each machine.

Practical Instructions...	10 00

JNO. T. TOLAND,
Dental Depot, 38 West Fourth Street, Cincinnati, Ohio.

N. B. I think it probable that I have *less real interest* in this matter than any dentist in the U. S., being equally ready to supply a license and materisls to those who wish, or to supply machines and materials without a license to those who do not want a license. But whilst I am ready to acknowledge the *just* claims of all persons, I wish at the same time to protect the interests of the profession by affording them such information as will enable them to act understandingly.

Crystal or Sponge Gold.—I have just received a supply of this article from the patentee and manufacturer, which is most beautiful in appearance, and works to a *charm.* Those who desire to use this article, may hereafter depend on receiving it promptly, as I have made an arrangement which will ensure a constant supply.

The Artisan and Blowpipe.—I would call attention to this new apparatus, as advertised and illustrated in our advertising pages. It is one of the most perfect contrivances ever placed before the profession. Those who have tried, speak of it in the highest terms.

Photographs.—At the request of the present graduating class, I have procured a beautiful photograph of each of the members of the faculty of the Ohio College of Dental Surgery all upon one plate 10 by 12½ inches. It is finely gotten up, and makes a neat picture. The pictures are all faithful representations. They can be obtained by applying to, or addressing John A. Watling, care of J. T. Toland, 38 West 4th Street, at $2 50 per copy.

J. A. WATLING.

Utica, Jan. 1st, 1860.

The subscriber, who was a member of the firm of A. J. Watts & Co., of Utica, New York, having withdrawn from that co-partnership, is now engaged in the manufacture of

CRYSTAL GOLD,

EXCLUSIVELY.

Having since such withdrawal, the sole control of this article in all its stages, free from any interferance, he is enabled to make a perfectly

UNIFORM AND SUPERIOR ARTICLE,

consisting entirely of the bright, soft, silky, leaf-like formation. The manufacture being now conducted *solely by himself* and constantly under his personal supervision, in all its stages, he engages that hereafter, the profession will not suffer from impurities allowed to remain from the hasty and careless manner in which it has, sometimes, heretofore after its manufacture, been hurried through the washing, and other operations in opposition to the express directions and desires of the undersigned.

A full suppply of the Crystal Gold is kept on hand, and orders accompanied with the Cash will be filled with promptitude and fidelity.

Put up in one-eighth, one-quarter and one-half oz. boxes,

At $30 Per Ounce.

A. J. WATTS,

UTICA, NEW YORK.

FRENCH INSTRUMENTS.

EXCAVATORS, DRILLS AND PLUGS.

I have now on hand and have arranged to receive regular supplies, direct from the manufacturer, a full assortment of these excellent instruments.

After years of annoyance with inferior excavators and drills, which would either break the first time they were used, or be so soft as to be always dull, and plugging with imperfect points, badly surrated and worse tempered, the profession can now appreciate instruments in this line. Excavators with an edge like a razor burs, cut with perfect regularity, and pluggers surrated with clean, clear, distinct, sharp points, every point of equal length, and yet so delicate as scarcely to be visible to the naked eye, and withal the *temper perfect*, so as neither to break or bend. The prices are something above the ordinary price, but would be cheap if twice as high as they are

Excavators and burs	$2 00 per dozen.	
Fang Excavators and pluggers	2 50 "	
Small Octagon Wire-Headed Pluggers		$3 00
Octagon File Cut Pluggers		5 00
" Ivory "		10 00
Steel Handled Chisels		4 00
Large Steel Handled Burs, for dressing fillings		7 50

THE
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Original Essays and Communications.

THE PHYSIOLOGY AND PATHOLOGY OF THE MOUTH.

The Mucus of the mouth serves a variety of purposes. The power it possesses of protecting the surface which it shields, from mechanical injuries, has already been mentioned. It has an equal power of protecting the part covered by it, from chemical injurious impressions. It prepares the substances that are brought in contact with it for absorbtion. It absorbs water, and thus keeps the parts damp and soft and pliable, and in a condition to allow a free osmotic circulation through it. It also serves as a safety valve or outlet for various morbific materials that may have accumulated in, or have been generated within the fluids of the mouth.

The power of the mucus to protect the mucous membrane from mechanical and chemical injuries may be observed at or near all the outlets of the body. In inflammation of the nose, where the nostrils lose the power of secreting mucus, the nasal passages are acted upon by the air inhaled in the inspirations and smarting, and a burning sensation follows. The usual forms of pain in the earlier stages of what is called a "cold in the head" are illustrations of the suffering that follows the absence of mucus.

When a person has "taken a cold" and the ordinary cutaneous transpiration has been checked, an increased flow of mucus may serve as a drain for the morbific materials. Diarrhœa often serves to furnish an outlet for deleterious agents that have found lodgment in the blood. These facts were perceived early, and hence these agents, as the mercurials, that cause a greatly increased flow of saliva and mucus in the mouth, have been considered specially valuable for the purpose of depurating the system of morbid materials not easily gotten rid of by other means.

The cyanide of potassium in the mucus of the mouth, as is not to be found in any other part of the system, doubtless subserves some useful purpose, but what purpose has not been determined.

The *Water* of the mouth is secreted in part, by what are called the *arborescent* glands. These appear as simply branched hollowers in the mucous membrane. They may be compared to a bunch of grapes, or to places from which a bunch of grapes had been dissolved and removed. In these glands the papillæ cease at the outlet of the hollow or tube, which is enclosed with a net-work of blood vessels and lined with epithelium. The drops of water that are poured out on the lips come from the arborescent glands of these parts; others are situated in the cheek and on the tongue. The salivary glands are only arborescent glands of a large size, and seated deeper in the tissues than those of the lips, cheeks or tongue.

The sub-lingual, the sub-maxillary, and the parotid glands all belong to the arborescent division, and all secrete a transparent fluid which is very near pure water, and the amount of their excretion in the aggregate is quite large.

In addition to the fluids poured into the mouth by the follicular glands,—the mucus; and the fluids secreted by the arborescent glands—the water; the mouth is supplied with moisture which exudes directly through the walls of the vessels that abound in the mucous membrane just under the epithelium. This transudes in the same way as the fluids of the lungs is transuded which keeps those organs moist.

Much fluid is excreted into the mouth by the various means indicated, compared with small amount of those fluids which are absorbed again from the mouth. But there are certain articles of the more rare and volatile character that seem to be readily absorbed from the mouth. Among these may be named alcohol, tobocco, onion, and other fancy articles that are taken into the mouth. All the various fluids of the mouth, *combined* from what is termed the *saliva.*

The *Pathological* conditions of the mouth that are directly connected with the fluids of the cavity, may be stated to be :

Arrested Secretion,
Acute Catarrh of the Mouth,
Chronic Catarrh of the Mouth,
Excessive Formation of Epithelium,
Acute Inflammation,
Anæmia.

These various conditions may be present, either one alone and unaccompanied with any one of the others, or they may occur two or more of them at the same time; or one condition may obtain in one part of the buccal cavity while another condition is observed in another part of the mouth.

The secretions may be arrested either from a defective supply of blood to the secretory organ, or from defective innervation of the organ, or from an organic disease of the organ or some one or more of its structures which diminishes its secretory power.

In many forms of fever, where the blood is changed by a poison absorbed into it or formed within it, or in inflammation where the part inflamed yields a poison to the blood and thus poisons that fluid, the tongue may have a darker color than natural, with a sticky and opaque epithelium, and dry, or but imperfectly supplied with moisture, and if the mouth is left open but for a short time, and the saliva is not carefully placed upon the tongue quite frequently, the breath as it passes, dries up the moisture leaving the tongue quite dry and liable to fissures.

As the surface of the tongue becomes dried, the walls of the sub-epithelial capillaries crack, the blood, or at least the serious portion of it oozes out, and drying upon its surface, gives to the tongue a brown or reddish-brown coat.

The diminished secretion, at times, where the blood has been poisoned as here indicated by fever or inflammation, allows the fluid exuded from the fissured capillaries to accumulate in quite large quantities, and if there is much of the red portion of the blood in it, it is tough; and when removed, comes off in flakes, leaving the surface of the tongue red.

This redness and rawness of the tongue indicates that the fluids of the system are seriously poisoned, and the vitality of the mucous membrane so low that there is danger of its sloughing and forming ulcers quite difficult to heal. Especially will there be great danger indicated, if the patient has taken mercurials or antimonials or any other medicines tending to depress the vitality of the organism.

The *Treatment* for arrested secretion of the fluids of the mouth, when caused by a poisoned condition of the blood must be governed by the knowledge that this poisoned state of the fluids seldom continues long, for as the disease runs its course unembarrassed, it tends to a speedy termination, as small pox and measles tend to a speedy termination.

While the arrest of the secretion lasts, but very little of the ordinary foods can be absorbed. Amylaceous foods, which require to be acted on by the saliva, not meeting with the required fluid, are hence not prepared for absorption and nourishment of the patient. But albuminous foods, where the albumen is properly suspended in a sufficiently large quantity of water that the water may take the place in the stomach of the fluids, usually furnished that viscus by the mouth, can be absorbed into the system and serve as nutrition. Hence beef-tea, broth, soup, and other solutions of animal food are far the best in those conditions of the system where the tongue is dry and dark and fissured. A little gelatinous matter, or even a solution of gum or mucilage, taken in the mouth may serve to shield and protect the dry and exposed mucous surfaces, but such solutions retard absorption and should never be taken in more than quite small quantities at a time. Whatever animal food is given, it should be suspended in plenty of water when there are indications from the tongue that the esophagus or stomach are lined with a superabundance of epithelial scales, for those epithelial scales will absorb a considerable portion of the water. But if the stomach is raw and has a surface unprotected by the epithelium, the food should contain less water and be boiled until it is almost or quite a jelly.

As this condition of arrested secretion is usually but of short duration and tends to recovery, proper care in regard to food is of more importance than in regard to the special medicines used.

Stimulants of a permanent character, and especially those that act specifically on the mucous membrane, will aid to restore the arrested secretions of the mouth. The tincture of xanthoxylum berries appears to be specially valuable. The alcohol has a tendency to prevent destructive change in the tissues, while it and the prickly ash both rouse the nervous energy, and the glandular activity of the parts. Sugar also has a preservative power, and as it is changed to lactic acid in the stomach it aids digestion, when given in proper quantities and at proper intervals.

Malt liquors, wine and brandy are of late years being considered almost indispensable in this condition of the system. Tonics, as chamomile flowers, hydrastis, canadensis root, gentian, quassia and other bitters have a direct tendency to arrest the degenerative changes of the tissues, and thus the ravage of the diseases.

Proper care must be taken to keep the emunctories of the system open by apperients, injections, diaphoretics and diuretics, and free bathing and friction of the skin.

AN ADDRESS AT THE COMMENCEMENT OF THE DENTAL COLLEGE OF OHIO, 1860.

BY B. P. AYDELOTT, M. D., D. D.

President of the Board of Trustees.

EVERY pursuit in life demands more or less study. Some persons indeed seem naturally averse to books; and what little knowledge they acquire by these is a task to which they must be driven. Still, even such persons when they become engaged in the business walks of life, find that they must study these—and that just the more closely too for having neglected their book education; or they will remain mere drudges all their days, ill-informed, discontent, poor, and of little or no influence. To be even a thriving mechanic, or a prosperous man of trade demands no little study of some kind. Whatever our position or calling, the *understanding* as well as the body must be employed, or we shall never accomplish much.

But there are pursuits in life for which early preparatory education is almost indispensable. The few who have eminently succeeded in these without this previous study—such a preparation, we mean, as only books and judicious teachers could give—have triumphed only by laboring the harder to make up for the want of early advantages, or their neglect to improve these. But it is a melancholy fact, that these self-making men frequently sink into a premature grave, broken down by the toils which their circumstances and their aspirations make necessary. Early study would have saved them for usefulness and honor.

And are we asked—what are those pursuits which imperatively demand study at every step, and for which early education too is so indispensable? We answer—the *professions*, technically so called,—more especially those of law, medicine, and theology.

And why is study so important here? Because so many sciences are involved in the knowledge of them that it requires years of toil over books before one can be properly qualified even for a pupilage in the professions; and then other years of similar toil before we are duly prepared for the practice of the profession; and afterward, a whole life of study in order to stand up as masters of the profession; and because also the social position of the man who is engaged in any of the professions, is such as calls for high and varied intelligence and thorough intellectual training, as well as elevated morals and refined manners. Without these qualifications, acquired some how and at some time—and generally the earlier the better—no one can honestly expect or acquire the position which a professional man ought to occupy.

We need not stop to show the truth and the importance of these introductory remarks. No one who has an adequate idea of a profession, and who is sensible of the obligations it imposes, will deny their truth or importance.

We proceed then to bring before you, as briefly as we can consistently with clearness,—the *Subjects*, the *Method*, and the *End* of study. And first of

I. The *Subjects of Study*. That course of study which is adapted to man as man, and to the particular position of the individual is the proper course for him. But man is an intellectual and moral being, and a being susceptible also of the emotions of the sublime and beautiful; and these various capacities, intellectual, moral, and æsthetic, are all associated with a physical structure. In other words,—he has understanding, conscience, and taste embodied in a material frame.

Again:—every department of nature, the whole storehouse of God's works, is capable of shedding light upon the path of the professional man. Every kind of knowledge he may turn to good account; much knowledge is absolutely necessary to him. He ought therefore to be a universal scholar.

We do not mean, indeed, that the professional man ought to be a thorough embodiment of all learning—a sort of walking encyclopedia, useful chiefly for occasional reference by others. Not at all. Such a man—were such an one possible—would utterly fail of professional usefulness and success. We say were such an one possible—because the subjects of knowledge are so numerous and extensive, that no one can be profoundly learned in more than a single department, and often only in a portion of that department.

This, however, we do mean:—he who is preparing for the study of a profession ought to go over the whole outline of science and literature, and thus make himself acquainted with, at least, the general principles of every species of knowledge. It is only then he is best qualified to cultivate with special assiduity those branches of learning involved in the daily and intelligent practice of his profession. In one word,—he should be a good general scholar, and then specially learned in his profession. He who brings such a preparation to his duties can scarcely fail to be useful, successful, honored.

In this day of general education and consequent universal diffusion of knowledge, such are the views commonly entertained concerning the professions. The public expect the professional man not only to be thoroughly learned and skillful in his particular pursuits, but to be a good general scholar also, able to converse well upon scientific and literary subjects, and to be a man of unexceptionable morals, and of gentlemanly culture. It is too late in the day for an ignoramus, or a corrupt man, or a clown to get along in the professions. By force of peculiar circumstances, or by dint of impudence, he may, in certain situations and for a time, succeed, but he will, sooner or later, be found out and despised.

And we ought to be thankful that it is so; it shows progress —healthy progress in the world.

Is it here asked—where may such a preparatory education be best acquired? We answer, without hesitation, in our established colleges. Their course of study, scientific, literary, moral and æsthetic, together with their customary surrounding influences, is well calculated to develop and cultivate the whole man. The youth who goes to a good college determined to make the best use of his opportunities, will be sure to find there competent, and often, very able scientific and literary instructors—men whose example and manners also, taken in connection with the society that usually grows up in the neighborhood of such an institution,—instructors, we say, whose example and manners thus accompanied, can not fail to render him a scholar, a man of principle, and a gentleman. And the youth who can live for years in the midst of such privileges, and yet come out a block-head, a knave, a debauchee, or a clown, shows—not the unfitness of the course of training, but his own unfitness for it. It was a sad mistake to send that young man to college. The ancients had a shrewd saying upon this subject:—Exquovis ligno non fit Mercurius:—a Mercury is not to be carved out of any stick of timber. Or as the homely English proverb expresses it: "you can not make a silk purse out of a sow's ear."

But we must hasten to consider secondly——

II. The *Method of Study*. Method in study is invaluable to the student. Without it little can be accomplished. Few will deny this; and yet most will ask—what is the best method of study? We will here give you results principally of our own long experience.

First, then:—

1st· *Fix your attention upon the particular subject before you.* Suffer not your thoughts to wander; give your whole mind to the matter. Never be satisfied with hasty, superficial views; penetrate the full depths of your author's meaning.

Much is lost from a want of attention. A dreamy, listless mood can lead to nothing but vague, indefinite, shallow views. Such a student never arrives at certainty; and he can have little confidence in himself, neither ought he to have. No man can ever be thoroughly acquainted with any one point, much less with the entire subject, who does not concentrate his whole mind, bring all his powers to bear upon the study before him. Again:—

2d. *Do not limit yourself to one branch of study at a time.* The soundness of this rule may be seen in the very nature of the mind. After a time—sooner or later in each one— the mind becomes weary of the matter before it; it begins to flag, and lose all power of attention. Now, so soon as this sense of weariness gets the upper hand of us it is wise to stop, because after this no real advantage is gained, no substantial improvement made.

But must we then do nothing? Certainly not; for it is a law of the mind that, unless completely jaded, it will awaken afresh, and acquire new vigor, simply by turning away from what is before it, and directing its attention to another subject. Every experienced student is sensible of this.

When, then, you find your mind losing its grasp of one subject, turn to another. Lay down, for example, your Greek or Latin classic, and take up some mathematical treatise; and when this also has wearied you, turn to intellectual philosophy, or ethics, or political economy; and when here again your attention flags, go to some work in natural philosophy; and then pass on to history, poetry, literary criticism, the periodicals of the day and similar reading.

We do not mean that all these subjects must be taken up on each occasion, for neither your time nor your strength will always allow this. But let your method be to turn from one subject to another as your mind becomes wearied by any one. In the very act of turning the attention is revived, and the whole mind reinvigorated. Hence you may in this way improve your time and opportunities to the uttermost.

When, however, you find that your mind does not readily recover itself by change—this is a sure indication that you have done all that you ought to do at that time. To go further is worse than useless; you will not only make no real progress in knowledge, but you will injure your health both of body and mind. Now throw down your books, dismiss all subjects of study, and go to splitting wood, or take a long walk, and, in this case, see to it that you do some good by the way to your fellow creatures. Such physical exercise, especially when accompanied by benevolent endeavors to relieve the suffering, or in any way promote the welfare of others, will most happily tend to draw off your mind from its usual pursuits, give it the best chance of recovery and so send you back again with recruited energies, and in every way better fitted for study. Further:—

3d. *Do not waste your time in reading poor books, much less bad books.* A bad book may as effectually corrupt the heart and ruin the man as the practice of vice. Indeed, such reading is itself vicious. And even authors that are light and superficial will be sure to weaken the mind and unfit it for vigorous effort.

Get not only good books, but the very best upon the subject; one such will be of more benefit to you than a score of inferior volumes. Again:—

4th. *Read always with pen or pencil in hand.* Make notes upon every book you study. Do this upon the fly leaves; and if these are not sufficient, fasten more blank paper in the back or front of the volume.

If your author mentions a valuable fact or incident, make a reference to the page; if a very important or original idea, mark its place; or if you meet with some peculiarly felicitous expression, or some passage of remarkable vigor or beauty of style, note it for future study; if you find any incorrect statement, or illogical argument, or error, be sure, at the time, to write as full and clear a refutation of it as possible.

By this careful, diligent reading, you can not fail to rise up fully acquainted with your author, and, not unfrequently too, with a more correct and thorough knowledge of the subject than the author himself had. You will thus become "wiser than your teachers;" be sure, however, to cherish a grateful sense of your indebtedness to them for having put you in the path to truth and for all the help they have given you by the way.

But besides storing your mind with valuable knowledge, and almost indelibly impressing it upon your memory, this method of making notes upon authors will enable you, years afterward, by glancing at your references, to recall all that is valuable in a book, and give you a ready access to its contents.

Another advantage of this method of making notes,—you will gradually accumulate, if your studies have been widely and diligently pursued, such a fund of materials in the various departments of science and literature, and such a facility of reference to authorities, as will best prepare you for lecturing, or for authorship yourself, or for contributing to the periodicals of the day, essays, reviews, and digests of authors and subjects. No one who has faithfully persued the method of study here indicated can fail to discover its value in this respect.

Some are in the habit of keeping common place books, and, I doubt not, they find them very useful. But I have never done this. I have rather trusted to my memory thus thoroughly exercised by close study and writing notes upon each author. And as the result—I here state it for your encouragement—frequently in writing discourses, addresses, or treatises upon particular subjects, I can readily recall important principles, views, trains of thought, and facts, or passages of striking force or beauty; and remember in what authors these occur, and turn at once to the places they occupy, or speedily find them by my notes on the fly-leaves, though twenty years or more may have elapsed since I studied the author, and I scarcely ever opened the volume since.

Every one will readily perceive that the acquisition of such a power is invaluable to the student, whether he be a professional man, or a public man, an author, an editor, or filling a professor's chair. Furthermore :—

5th. *Be careful to treasure up your odd moments.* When, perhaps, having finished some professional or other engagement, you found yourself at leisure—have you not at times thus said to yourself: "The dinner bell will ring in a moment; or Mr. So and So will be here in a moment, as he promised; or it is only a moment before I must go and fulfill such and such an appointment; I have no time therefore to take up a book."

But have you not often found that the dinner bell did not ring as soon as you thought it would? or, that the individual you were waiting for, did not meet his appointment as he promised? or, that, for some good reason or other, you delayed to go forth as you intended? And so you sat listlessly, or still worse, impatiently waiting; and in this way lost both your time and your temper. Whereas, had you taken up a volume, you might have been most profitably and happily employed. Any one who will try this plan of putting his odd moments to the best account in study, will be amazed, when he looks back upon the precious fragments he has thus gathered up.

Do not then risk your time or your temper upon the punctuality of others, or upon the uncertain events of life. Treasure up these odd moments; they will be sure to render you a wiser and a better man.

Let me here exemplify these remarks by a single case. Doubtless you have all heard of Dr. John Mason Good, the distinguished physician of London. No man was ever more diligent in business, and at the same time more devoted to study. Not a moment would he permit to pass away unimproved. Take one instance of his wise and careful use of time. At a certain period of his life, he was accustomed, before leaving home, to visit his patients, to tear a few pages from the Latin classic poem of Lucretius—"De Rerum Natura;" and as he was passing along the streets, instead of wasting his time in gazing upon the signs, or passing persons or events, he would, by a few glances at the pages he had brought with him, fix these in his memory, and then turn them in his mind into English verse, for which he had acquired a wonderful facility. When he returned home, after entering an account of his professional services, he would take out of his pocket the leaves of Lucretius, the bare sight of which would recall his poetical version. This he would then put upon paper. So he persevered till he finished the whole; and then he added to it a vast body of notes containing an invaluable amount of classical, sacred, and oriental learning. The work was published in two volumes, *quarto;* and had Dr. Good never written any thing else, this work alone would have deservedly placed him in the front rank of scholars. But it was only the fruits of his odd moments; and it is only one of the numerous and able productions with which this truly wise and diligent man enriched the cause of learning, and adorned his profession. Again:—

6th. *Compose much, and speak much.* Suppose yourselves, my young friends, standing in the garret of a house, and looking round, you saw here a rich center table, there a splendid pier glass, in this place a magnificent sofa and beautiful ottomans, in that a superb side-board with highly wrought chairs of various size and patterns, together with costly carpets, rugs, rich china wares for every use, chandeliers, tasty curtains, and kitchen furniture of every sort: and all these scattered in confusion, or piled up indiscriminately in huge heaps. "Of what use," you would exclaim, "of what use can this costly furniture be? It might as well be sunk into the depths of the ocean, or burned up, or buried in the bowels of the earth, for any good it does here to its owner or others."

Suppose again, my young friends, you walk through a spacious dwelling, and see it abundantly and richly furnished from bottom to top, and every thing in its place,—the parlors, reception rooms, sitting rooms, chambers, closets, kitchen—all admirably arranged for convenience and comfort; and good taste also consulted throughout. "Here," you would say, "is wisdom; with what judgment has every thing been disposed! There is nothing wanting for use or enjoyment. Such a home is a treasure; who would not wish to possess it? Every guest is tempted to repeat his visit. All is convenient, elegant, and fit for its right use."

Now, my young friends, is not such an apt representation of the merely learned man, and of the thoroughly educated man? The knowledge of the first, vast and multifarious as it may be, is like furniture piled away in a garret, of no use to its possessor or any body else. But the thoroughly educated man has his rich acquisitions all suitably arranged—every thing in its place. The taste is delighted, as well as every want met. And he can put all he has to immediate and most efficient use for himself and others. Hence the well educated man will be sure to command respect. Society will count him among its most valuable members.

But some may here ask—how can I be, not merely a learned man, but a thoroughly educated man? We answer—besides applying your mind most faithfully for the acquisition of knowledge, you must accustom yourself daily to write and to speak upon whatever has occupied your mind, and, so far as you can, upon what others, who have a right to your efforts, may desire to be instructed in by you.

By attempting to write upon a subject you will soonest discover how very imperfect is your knowledge of it; this will humble you, and lead you to more diligent, careful, and thorough research. By writing much your knowledge will also become well methodized—every thing will find its proper position; and you will acquire a continually increasing facility of making all you really know at once available for your own use and that of others. The same holds true of speaking also, though not to so great an extent.

Of what possible benefit are a man's largest intellectual acquisitions if these are not well arranged, and he can not give them ready utterance? They are just like so much furniture heaped away in a garret. I would rather know but little, and that little well, and be capable, on every suitable occasion, of bringing it out with clearness and interest by my pen or my tongue. I should feel in this case that I was of some use in the world, and that I deserved to be a respected and cherished member of the community. We may here add another remark. It is only the professional man who can write or speak with ease that is likely to advance the learning and honor of his profession. Once more:—

7th. *Prayer.* Besides the many commands and promises of God to us all in respect to prayer—besides these, is there not that in the very constitution of the mind itself which must ever render prayer of peculiar importance to the student? He who would use all the powers and resources of his mind to the best advantage, must be able at all times to have these completely at his command. But such readiness and self-control imply a calm spirit and great energy of will. Now, nothing tends so much to compose the mind and still every agitation of feeling, and, at the same time, give determination to the will, as prayer. He who sincerely prays, must have more or less confidence that he has God Almighty on his side; and consequently that he has nothing to fear, and that he can do all things fit for him to do,—all things really profitable to himself and others, and to which duty calls him.

Hence, I have always observed that pious young men, other circumstances being equal, were generally the best students and stood highest in their classes: and that even those who merely respected religion and paid more or less attention to its observances, though not really pious, were better students than the thoughtless and decidedly worldly. A grossly immoral man, I need scarcely add, can rarely excel in any branch of learning that requires close application. Such will have neither the disposition, nor that elevation of aim, nor that strength of purpose which are needful to perseverance in study.

But the importance of prayer to the student is too extensive a theme for a single head of a discourse. We will therefore close our remarks by simply pointing you to the example of Lord Bacon, the father of modern philosphy. That great man, with all his intellectual powers and vast stores of learning, still felt his utter insufficiency as a student and an author without God's help and blessing. Hence you will find in his works some specimens of his prayers—equally remarkable for their child-like simplicity of spirit and sublimity of thought.

Listen to an extract from one of his prayers as a student: "Illuminate the eyes of our minds and understandings with the bright beams of thy Holy Spirit, that we may daily grow in the saving knowledge of the heavenly mysteries of our redemption wrought by our dear Lord and Saviour, Jesus Christ; sanctify our wills and affections by the same Spirit, the most sacred fountain of all grace and goodness; reduce them to the obedience of thy most holy will in the practice of all piety towards thee, and charity towards all men!" Hear him, again, as a student thus pouring out his heart to the Almighty:—"We humbly and earnestly beg, that human things may not prejudice such as are divine; neither that from the unlocking of the gates of sense, and the kindling of a greater natural light, any thing of incredulity or intellectual night may arise in our minds towards divine mysteries; but, rather, that by our mind thoroughly cleansed and purged from fancy and vanities, and yet subject and perfectly given up to divine oracles, there may be given unto faith the things that are faith's!" But, once more,—hear how he prays, as an author, before publishing a production of his pen—"Thou, O Father, who givest the visible light as the first born of thy creatures, and didst pour into man the intellectual light as the top and consummation of thy workmanship, be pleased to protect and govern this work, which, coming from thy goodness, returneth to thy glory!" We now proceed, thirdly and finally to—

III. *The End of Study.* That we may clearly see what ought to be the great *end* of study, let us suppose that you have possessed all the advantages and opportunities of which we have spoken; and that you have duly improved these.

If it be thus with you, surely some such thoughts as these are very natural and highly suitable to you—so much so that we see not how they could fail to occur to you:—"I find myself, by God's gift, in the possession of a good share of mind; I have had, under providence, liberal means of improvement afforded me; I have been enabled diligently to make use of these; so that I now have acquired such knowledge as, if properly employed, is capable of making me very useful and highly respected. Surely I ought to make a suitable return to the Giver of all good, and I ought to be very happy in the lot he has seen fit to assign me. But, alas! I find that hitherto I have thought too little of God, too little of my own highest interests. I have lived for self and the world. I am verily guilty in the sight of heaven; and not only so, but I find in myself so much of weakness and proneness to evil, that in spite of all my good resolutions, I have not as yet sought first the kingdom of God and his righteousness.

"How then shall I obtain pardon for the past, and find wisdom and strength for the future to form and pursue such plans of life as will please God, satisfy my own conscience, advance me most in every true excellence, and exert the best possible influence over others?—so that when called hence I shall find it my happy privilege to go into eternity with a good hope through grace of never ending blessedness; and with a well grounded confidence also that I leave the world the wiser and better for my example in it? Should I fail in these things, whatever else I may gain, of learning, or wealth, or worldly honor,—I have failed in the great purpose of life, I shall make shipwreck of myself for time and eternity.

"How then may I obtain these precious benefits?—how be safe, useful, happy here, and prepared for the higher usefulness and blessedness of eternal life?"

Are these, my young friends, *your* thoughts—these the deep ponderings of *your hearts?* Do you wish light and satisfaction here? We thank God, if it is so with any of you; for such reflections and desires are the strivings of his Spirit in your bosoms. Do not resist them, we beseech you. Yield to them now,—they will lead you onward and upward, onward and upward to that good part which shall not be taken away from you.

Go then, in this teachable, enquiring, serious frame,--go to your Bible—God's message of grace and mercy to a lost world. And while you will find God's book dealing honestly with you,—showing in the light of his holy, unchangeable law, your guilt and ruin through sin; you will yet discover in it all your heart can wish in its deepest needs and largest desires. In that simple, but stupendous scheme of redeeming love brought to light by the gospel, you will see how the Holy Sovereign of heaven and earth can hold out the golden sceptre of mercy to the chief of sinners, and yet uphold the pillars of his righteous government in all their strength and grandeur. Sitting by faith at the feet of Jesus, clothed in his righteousness and renewed in the spirit of your mind, it will be your happy privilege to have the peace of God in your conscience, and his love shed abroad in your heart by the Holy Ghost given unto you.

Your views, your feelings, your wishes, your hopes, your aspirations will thus all become *new*,—so wonderful, excellent, soul-satisfying, NEW,—that you will then see you never knew before what true happiness was; your heart will melt in gratitude, and your mouth be filled with thanksgiving and praise.

And thus joyfully receiving the truth and spirit of Jesus—

your God and Savior—you will find in yourself a clearness, and a vigor of mind, and an energy of purpose to which you were before a stranger. Hence you will come to all your studies with a warmer, a nobler zeal to serve God in them, and to be increasingly useful to your fellow men—*the true end of study!*

Such a spirit will raise you above the petty jealousies and vexations of the world, while it will call forth into lively exercise every thing within you and around you, calculated to render you daily a wiser, a better and a happier man; ensure you increasing respect and success in your profession; and sustain you at every step in life with the growing assurance of that higher scene of usefulness, excellence, and blessedness which awaits you in God's eternal kingdom.

IRREGULARITY—TREATMENT.

Read before the Indiana State Dental Association, January, 1860.

BY DR. GEO. LUPTON.

THE subject of mechanical dentistry being under consideration, Dr. Johnson moved, that the regular order of business be suspended for the purpose of giving Dr. Lupton an opportunity of presenting some models, and exhibiting a very ingenious contrivance, invented by him, for correcting irregularities of the teeth.

Dr. Lupton remarked that he was very much surprised that the committee in preparing the order of business had neglected to mention the treatment of irregularities, as he considered it a subject of vast importance, not only to the dental profession, but to the community in general; and one which had not received that attention at the hands of a majority of dental practitioners in the west that it deserved. As he did not wish to trespass on the time of the convention, he would only call their attention to one out of the number which he exhibited.

The patient, a lad of 10½ years, in which the superior central incisors fell inside of the inferior, at each occlusion of the jaws, as represented in figure 1; they also stood in a diagonal position, far back of, and overlaping the lateral incisors, as shown in figure 3. Recourse was had to inclined planes, attached to a plate swedged, to fit the lower teeth, but with little benefit, as the patient soon got in the habit of letting his teeth rest on the top of the planes, as is frequently the case; consequently it was thrown aside as worthless.

fig. 1.

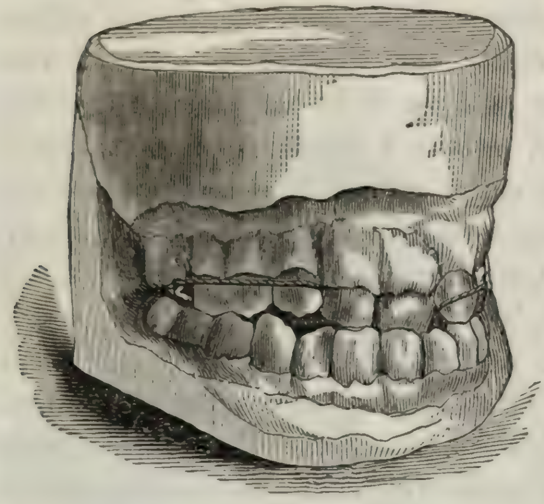


fig. 2.

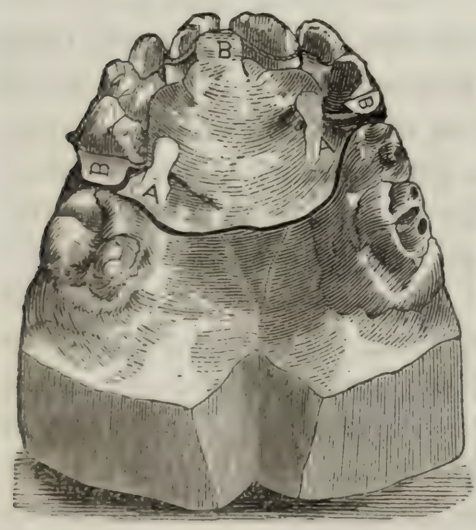
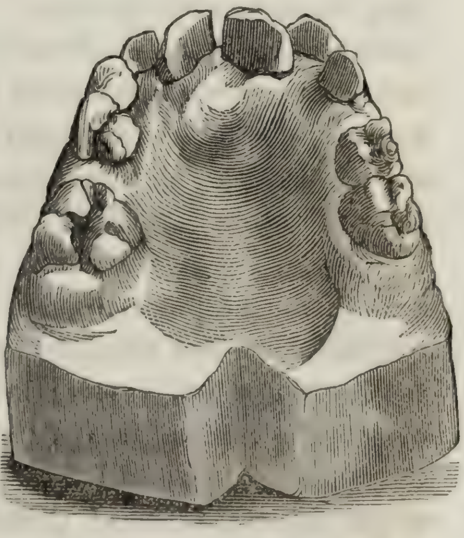
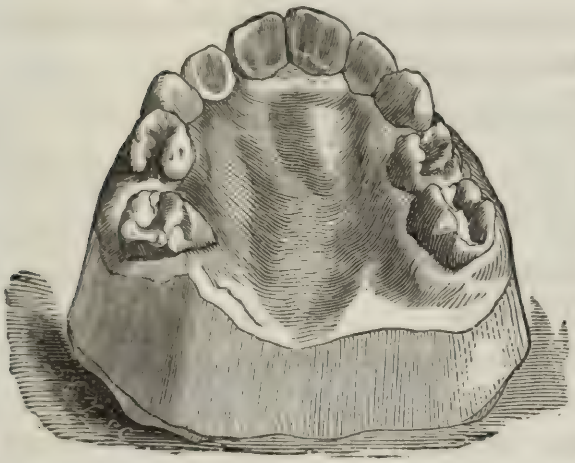


fig. 3.



As the permanent molars were so short as to afford no opportunity of attaching ligatures to them, it was found necessary to fit a plate to the roof of the mouth, on which to place attachments for the ends of the ligature, and having always entertained a very serious objection to the to the use of pins or standards, on account of their being in the way of the tongue, and the difficulty of tying a ligature to them when stretched to its utmost tension, he therefore adopted the following plan as being more simple and efficacious, and much more easily applied, having soldered two narrow strips to the plate (*a a fig.* 2) in the position that the standards should occupy, in such a manner as to form short, stiff springs, leaving only space enough between them and the plate to force the ligature into—the spring holding it firmly in its place without the necessity of a knot. Being very much annoyed by having to replace or tighten the ligatures every day or every few days, I at last hit upon the following plan to obviate that difficulty: finding a space on each side where teeth had been removed, I conceived the idea of inserting small, square blocks of india rubber in those spaces, and passing the ligature over them, thereby keeping up the tractile force of the ligatures for a much greater period of time; but here again I met with difficulties, being unable to keep them in their positions. I then had recourse to the following expedient,—I formed in the space where the teeth had been removed two small grooves or troughs, (*B B fig.* 2) with the posterior sides open for the reception of the blocks of india rubber; by this means they were held firmly in their places. I also formed a similar one (*B*) back of the central incisors. The ligature was then made fast to one of the springs on the palatial surface and carried out over the block of rubber on that side, passing along the labial surface of the teeth to the left lateral incisor, passing between it and the overlaping central, it was carried over the block of rubber at that point, and behind the right central; passing out between it and the right lateral, thence back to the block of rubber on that side, over which it passed and was made fast to a spring similar to the one before mentioned on the opposite side of the palatial surface, as represented in figure 2. I would here remark, however, that the blocks of rubber may be applied at such points and in such numbers as the exigencies of the case may require. I would further add, that in my opinion, there is no operation that the dentist is called upon to perform, that requires so great an amount of *determined, untiring perseverance*, as the correction of irregularities.

fig. 4.



In the case above alluded to the teeth were brought into place as shown in fig. 4 and the plate removed on the fifteenth day.

In the above mode of applying ligatures, they do not require removal oftener than once in two weeks.

Proceedings of Societies.

SIXTEENTH ANNUAL MEETING OF THE MISS. VALLEY ASSOCIATION OF DENTAL SURGEONS.

MINUTES.

The Association met according to adjournment, in the Ohio College of Dental Surgery, February 22, 1860. The President being absent, the Vice President, Dr. H. R. Smith, presided.

Members present: Drs. H. R. Smith, J. Taft, S. B. Smith, Joseph Richardson, James Taylor, A. G. Stipher, J. W. Baxter, C. N. Woodward, C. Bonsall, H. A. Smith, J. P. Ulrey, and G. Watt.

The minutes of the last meeting were read and approved. The Executive Committee being absent, on motion of Dr. Taft, the Chair was empowered to fill the same, which was done by the appointment of Drs. Taft, Taylor and Baxter, who immediately retired for consultation, and in a few minutes presented the following report:

REPORT OF THE EXECUTIVE COMMITTEE.

The Executive Committee would respectfully submit the following report on the order of business:

I. Reports of Committees.
II. Reports of Officers.
III. Reading of Essays and Papers.
IV. Election of Officers.
V. Miscellaneous business, including the following subjects for discussion:

1. Mechanical Dentistry,
Continuous Gum Work,
Vulcanite Base,
Cheoplasty,
Gold Work.

2. What is the best treatment when the pulp of a tooth is exposed, in order to secure its vitality?

3. Filling Teeth.

4. Irregularities of the teeth, their causes and modes of treatment.

5. Structure and nutrition of dental tissues.

6. Hemorrhage following extraction of the teeth, and best treatment. Respectfully submitted,

J. Taft,
Jas. Taylor,
J. W. Baxter,
Committee, *pro tem.*

The report was accepted and adopted, and the Committee discharged.

The Committee on Membership presented the names of Drs. Wm. H. Atkinson, of Cleveland, Ohio; J. F. Johnston, Indianapolis, Indiana; George Lupton, Shelbyville, Indiana; J. A. McClelland, Louisville, Ky.; Geo. F. Foote, T. F. Davenport, Cincinnati, Ohio, and Stoddard Driggs, Lexington, Ky., as candidates for membership, who, on being severally balloted for, were declared unanimously elected.

The Committee on Dental Progress had no report and was on motion, excused, as was also the Committee on Irregularity.

The Treasurer presented the following report, and requested that a committee be appointed to audit the same:

The Treasurer would report the following as the state of accounts at this time:

	Balance in the Treasury, Feb. 22, 1859		$153 00
	Receipts from Initiation fees and Annual dues		74 00
			$227 00
1859.			
Feb. 25, '59,	To cash paid Dr. Watt for reporting as per order of Association	$15 00	
	To cash paid janitor for services as per order of Association	8 00	$023 00
	Balance		204 00

In addition, the Treasurer would report the following names of gentlemen elected to membership last year, but who had not yet paid their initiation fees, viz: Drs. J. B. Doughtry, of Monticello, Miss.; G. B. Lenoir, also of Monticello, Miss.; O. Wilson, of Aurora, Illinois, and B. B. Ward, Mobile, Alabama.

All of which is respectfully submitted,

Feb. 22, 1860, CHARLES BONSALL.

In compliance with the Treasurer's request, the Chair appointed Drs. Atkinson and Stipher, a committee to audit the report, who after due examination reported as follows:

The Auditing Committee, having examined the Treasurer's accounts, would report them as correct.

W. H. Atkinson, } Committee.
A. G. Stipher. }

On motion of Dr. Taft, the election of officers was made the order of the day for 11½, A. M., to-morrow.

Miscellaneous business being now in order the discussion of No. 1 was begun, and while it was still pending, on motion, adjourned till 2½, P. M.

FIRST DAY—AFTERNOON SESSION.

Met according to adjournment. The President and Vice President, both being absent, Dr. W. H. Atkinson was elected President, *pro. tem.* The discussion of No. 1 was resumed, the consideration of its subdivisions occupying the afternoon. The Vice President soon arrived and took the chair. Adjourned till 10, A. M., to-morrow.

SECOND DAY—MORNING SESSION.

Met according adjournment, the Vice President in the chair.

On motion of Dr. Watt, the resolution providing for a Standing Committee on Dental Progress was repealed. Proceeded to the discussion of Gold Work, the last subdivision of No. 1.

It being the order of the day, proceeded to the election of officers, which resulted as follows:

W. H. Atkinson, *President.*
J. F. Johnston, *Vice President.*
Joseph Richardson, *Corresponding Secretary.*
Geo. Watt, *Recording Secretary.*
Chas. Bonsall, *Treasurer.*
Geo. F. Foote, T. F. Davenport, Stoddard Driggs, *Executive Committee.*
J. Taft, J. W. Baxter, J. A. McClelland, *Committee on Membership.*

On motion of Dr. Watt, the resolution providing for a Standing Committee on Irregularities of the Teeth was repealed.

Dr. TAFT made, by consent, some remarks on the importance of microscopic researches, and after some general remarks by Dr. Atkinson and others, Dr. Johnston offered the following resolution, which, after due consideration, was adopted:

Resolved, That this association appropriate one hundred dollars for the purpose of aiding in the purchase of a microscope, to be used conjointly by this association and the Ohio Dental College, provided the faculty of said college contribute a like, or a greater amount of funds to this end and for that purpose.

Adjourned till 2½, P. M.

SECOND DAY—AFTERNOON SESSION.

Met according to adjournment, Vice President in the chair. Drs. H. A. Smith, Wm. H. Atkinson and Geo. F. Foote, were appointed to read essays at the next annual meeting. It was moved and carried, that a committee of two be appointed to carry out the spirit of the resolution relative to the purchase of a microscope. Drs. Atkinson and Taft were appointed said committee.

The Vice President appointed Dr. Baxter a committee to conduct the President elect to the chair, who immediately discharged the duties. On taking the chair President Atkinson made some highly appropriate and practical remarks, which were well received by the association.

On motion of Dr. Watt, it was resolved that a committee of two be appointed to report at the evening session, on the best practical mode of obtaining a standard treatise or essay on the subject of Irregularity of the teeth. The Chair appointed Drs. Watt and Taft said committee. A letter from Dr. John G. Hamill was received, and read by the Secretary, and, on motion, placed on file. The remainder of the afternoon was spent in the discussion of No. 2.

On motion, adjourned till 7½, P. M.

SECOND DAY—EVENING SESSION.

Met according to adjournment. The committee appointed to report relative to an essay on Irregularity reported as follows:

Your Committee, in view of the great importance of the subject under consideration, would respectfully recommend

1. That an award of fifty dollars be offered by the association for the best treatise or essay on Irregularity of the teeth.
2. That a committee of five be elected by ballot to examine the treatises submitted and make the award.
3. That documents competing for said award must be placed in the hands of the chairman of said committee, as early as January 1st, 1861.
4. That the author's name, in a sealed envelop, accompanying each document, which envelop must not be opened, unless the accompanying essay receive the award, and no essay may be shown to any person not a member of the committee, till after the association has accepted and adopted the report of said committee, when, of course, the successful treatise becomes the property of the association.
5. That rejected documents be disposed of according to accompanying directions.
6. That this offer and its conditions be published in all the dental journals of America.
7. That if the committee believe that none of the essays presented are worthy of the award, they have power to reject all of them, and so report to the association

Respectfully submitted.

Geo. Watt,
J. Taft. } Committee.

The report was accepted and the committee discharged. A motion was made to adopt the report which was lost.

Report of the Committee on Prize Essays.—Your committee would most respectfully submit the following report on the Prize Essay, that about one year ago the third edition of the Prize Essay was issued. It consisted of one thousand copies bound in paper, five hundred copies bound in flexible cloth, two hundred in fine cloth binding and gilt; cost of the entire edition was $129 00. The entire value of the edition, at retail price, was $170 00. There is remaining on hands of the books to the amount of $16 00, leaving a net profit of $25 00 over and above the cost of the edition, together with the $16 00 worth of books on hands, making a net profit on the whole edition of $41 00.

Your committee would also suggest that another edition is already called for, and would suggest a revision of the work, by the author.

J. TAFT.
J. RICHARDSON. } Committee.

The report was accepted and the committee continued with the same powers.

The remainder of the session was occupied with the discussion of No. 3.

Adjourned till 9, A. M., to-morrow.

THIRD DAY—MORNING SESSION.

Met according to adjournment. President in the chair. Proceeded to the discussion of No. 4. No. 5 was continued till the next annual meeting, with a request that the Executive Committee give it a prominent place in next year's programme. No. 6 was discussed, after which, by request, the President read a paper on the "Relation of the Physician and Dentist." A cordial vote of thanks was given for the paper; but, as it was written expressly for a medical journal, a copy for publication was not requested.

On motion of Dr. Watt, Drs. J. Taylor and H. R. Smith, were added to the list of essayists, the reason for the motion being stated, that the association had lost standing by a neglect of this important department of its proceedings.

The Minutes were read and approved. On motion adjourned to meet in the Dental College, Wednesday, February 20th, 1861, at 10 o'clock, A. M.

GEO. WATT, *Secy.*

SIXTEENTH ANNUAL MEETING OF THE MISS. VALLEY ASSOCIATION.

DISCUSSIONS.

I. Mechanical Dentistry.

1. *Continuous Gum Work.*

Dr. Atkinson said he had not been successful with continuous gum work. It was very pretty, and gave the operator great control as to shape and position of the teeth; but he thought it was not strong enough. If platinum were as stiff as gold plate, he thought it would answer. If it would stand, he would regard it as A No. 1; but he did not know of a case that had not to be re-made or set aside.

Dr. Richardson remarked that when built out much it was sometimes too heavy. Most of the properties of this work, he said, are already well recognized. It was very *pure*—both the metal and the porcelain; and nature could be imitated to any extent. It had not as extended a range of application as gold, and some other styles of work. When the case would admit of a sufficient quantity of body, he thought it was strong enough. But strength might be gained by making a double plate, having the two lamina separated in the palatal region the depth of an ordinary air chamber, and then filling in gum body between the plates, so as to convert the Cleveland chamber, thus formed, to Gilbert's. If the lingual surface of the plate was not enameled, this construction presented a smoother surface to the tongue.

Dr. Johnston said his experience and observation did not correspond with Dr. Atkinson's. He had not been troubled with breakage. One of the first cases he ever made had been worn seven years, and was still serviceable. The materials have been improved; and he was capable of doing better work than when less experienced.

Dr. ATKINSON thought that, to have a continuous gum job last seven years, the articulation must be very accurate.

Dr. TAYLOR said he had lately repaired one of Dr. Allen's first pieces, which was still "wearable," but very much cracked. As to his own cases, for the past ten years, a large majority have had to be made over again, or replaced with other work, but some are still standing. Notwithstanding these failures, he would not be willing to do without this style; and he regarded it as the greatest improvement in mechanical dentistry. He remarked that it was once maintained by Dr. Allen's opponents that the body would not adhere to the plate. Now the same persons cover the entire plate, and it sticks. Some people, he said, would break their teeth under any circumstances, while others seldom did. With the latter, the teeth will stay as long as the mouth remains unchanged in shape. But the mouth gradually *changes;* and as this work can not yield, by the plate pressing up, the gum body cracks. He referred to a case in which not only continuous gum, but even gold plates would break, from this cause.

Dr. ULREY said he had very little experience in the matter. Three months ago he broke up a piece which had been worn seven years. It was badly cracked. He supplied its place with gold.

Dr. JOHNSTON stated that, when preparing this kind of work, he gives it his undivided *personal* attention; and his success had been as satisfactory as with other styles of work. Its great liability to break by a fall, and the difficulty of mending it were his strongest objections to it.

Dr. TAFT said that his late experience differed very much from that of some others. Six years ago he had partially failed with this work, but he had "posted up," and the materials had been very much improved. For twenty months past he had been very successful in its use. It was not more liable to accident while making than other work, nor more so while wearing, unless it meets with a fall. Then it is more likely to break. If work fits badly, and does not antagonize properly, it will break, let it be what style it may. By annealing at a high heat, a platinum plate could be swaged to fit better than a gold one; and this was an important consideration. The plate should rest firmly on the ridge; and it might be strengthened, as described by Dr. Richardson, or by making depressions over the rugæ deeper; and also a continuous backing. For this latter mode, the single rivet teeth are preferable. The antagonism must be perfect—not striking at only one or two points. If these points were all observed, he thought it would last as long as gold work usually does. It had, also, many advantages over gold work. It is not offensive; for when the body is good, and well enameled, he maintained that it does not absorb the fluids of the mouth. He thought it as easily repaired as gold work. But this was not the question at issue; for, if it is *better*, the trouble, time or skill should not be taken into consideration. He had used it in partial sets of every variety, and has not, in the last twenty months, had to repair this oftener, in proportion, than other styles of work. Most of his temporary sets are now mounted in this style. He takes an old platinum plate, sometimes, and mills it down a little thinner than ordinary—swages and fits it, adjusts the teeth as usual for temporary work, and adapts a narrow rim of gum body to the necks of the teeth, the edge of the plate and the inequalities of the gum, and bakes and finishes in the usual method. When thus done, temporary work presents as fine an appearance as permanent. This work, he said, could not be slighted with impunity. Every step had to be perfect. With beginners, it took more time than gold work; but with equal familiarity, it did not. He now burnt it on a platinum wire frame; and, being thus uniformly heated, it seldom changes—

was not as liable to warp as gold work. When it did change, it was to be corrected by forcing it back on the cast.

Dr. Richardson said that in nearly all the cases he had repaired, the teeth, and not the body, were broken. Thought continuous gum work three times as liable to break as gold work. The body formerly used, he said, was not reliable. He had not much confidence in lining the teeth so as to strengthen the work,—thought the body was strong enough. He regarded the covering of the lingual surface of the plate as a great improvement. He had not regarded the want of strength as an objection to this style of work. He thought continuous lining best—had seen cases break, he thought for want of it. He regarded this style as mainly adapted to full sets. When the under jaw was large, strong, and prominent, he thought this work would not stand well. For the last eighteen months, his success had been much better with it than formerly; he considered the new gum quite an improvement on the old.

Dr. Lupton said he had formerly used this style of work, and abandoned it, but was now using it with more satisfaction. He referred to a partial set he had lately seen, which showed superior workmanship.

Dr. Johnston said that if he had to adopt one style of work exclusively, he would take gold work with single gum teeth.

2. *Vulcanite Base.*

Dr. Atkinson said he was slow to adopt vulcanite base, but now thought it the best material in use, especially for lower grinders when the front teeth remain. The vulcanite meets that case exactly. He exhibited a piece composed of vulcanite plate with two molars on each side, with which the patient eat hard food immediately after its insertion, without in the least displacing it. With a perfect impression, we are sure of a perfect fit. As claimed for continuous gum work, every thing must be done perfectly, and success is in proportion to the pains taken. When blocks are used with this work, he suggested that the canines be separate, that they may be placed sufficiently prominent to give the arch the natural curve. After the teeth are ground in place, he suggested the cutting of a dovetail groove in the sides of them to give the material a firmer hold. He thought the vulcanite was more pleasant in the mouth than the metal or porcelain plates; and it gave perfect control as to "plumpers."

Dr. FOOTE liked the vulcanite better than any other material for partial sets. For taking impressions for partial pieces, he preferred gutta percha. This should be boiled and worked till perfectly softened; then the surface should be chilled in cold water, to prevent its burning the mouth. The plaster should be *immediately* put in the impression. By covering the plaster model with tin foil before packing, he said the surface of the base is improved. The tin may be dissolved off with hydrochloric acid. He considers the work sufficiently strong, and thinks a gold plate would bend before this breaks. He had never seen a tooth come off when "pins" were used. Dovetailing alone would not quite answer the purpose. Pin teeth, he said, were stronger than others; and he would always advise the selection of strong teeth. This work, he remarked, can be mended two or three times, but by each vulcanization it is rendered darker in color and more brittle. He had not seen any difficulty with lower sets, from its lightness; and he had yet to see the first piece of rubber work break. He charged the same for it as for gold work, but not as much as for continuous gum.

Dr. ATKINSON remarked that when vulcanized at too low a temperature, it was leathery; at too high a heat it was brittle.

Dr. FOOTE said that when the temperature was too low, the work would taste and smell of sulphur, and turn black in the mouth; but when properly vulcanized it would not. The "American Hard Rubber Company" he said, directed a temperature of 310 degrees for three hours; but this would render the substance rather brittle.

Dr. ATKINSON stated that it begins to vulcanize at 270 degrees; and, by giving time enough, that temperature would do. He thought the "three hour gum" would be vulcanized by a temperature of 290 degrees, for four hours.

Dr. RICHARDSON said he liked the work, but would suggest a difficulty which was rather annoying, especially in partial pieces. The thing is to get it out exactly as it goes in. In general, he said, there must be a superflous quantity of gum material. This would press out and prevent the moulds from coming accurately together. (Dr. Atkinson said that grooves should be made for the surplus to run out by). Dr. R., resuming, said that the excess would not always follow the grooves; and that when the moulds did not come accurately together the plate was too thick. By this means the teeth were elongated, and their gums were, in partial sets, thrown off the natural gums. A remedy had suggested itself to him, and that is a deep groove around the matrix, as close to it as practicable, with gateways leading into it. He named, as another objection, that it insinuates itself between the teeth, and gives an unsightly appearance. To prevent this he had inserted tin foil between the teeth, and dissolved it out with hydrochloric acid, after vulcanizing. He likes the vulcanite better than gold work; and regarded as not the least of its good properties, that it could be built out to any extent, without becoming too heavy. He regarded lightness as an important property, and thought their weight was an objection to continuous gum work, and cheoplasty. He had tried it in a case in which gold, silver, and cheoplasty had proved unsatisfactory, and was successful.

Dr. FOOTE: to prevent the surplus gum keeping the moulds apart, digs a channel around—not too close to the teeth, and makes many small gateways into it,—these gateways widening as they go from the teeth. He puts tin foil around the teeth on the plaster model, against which the gum is to be fitted. In answer to a question of Dr. H. A. Smith, he stated that, if the lip would be rendered too prominent by the gum coming over the ridge, he would grind the teeth to rest on the natural gum, and rely solely on the pins to hold them in place.

Mr. J. T. Toland exhibited an upper set of teeth mounted on "amber base," said to be vulcanized at 300 degrees, in four hours. It presented a neat appearance, and much more nearly approximated a gum color than the rubber specimens on exhibition.

Dr. Taft said he liked the vulcanite about as well as he did a year ago. As to durability, he thought it would prove satisfactory—would do about as well as any thing else. Dr. Bonsall's case, made in the association a year ago, presents now a little roughness. He had noticed the same in other cases. He thought the manipulations would still be much improved. He referred to the great improvements in vulcanizers, and remarked that the boxes, or cups, must also be greatly improved. The "guides" should admit of no lateral motion; for when they do, the teeth are likely to be displaced. The boxes should be improved; and only the best plaster should be used for moulds.

Dr. Richardson remarked that the guides should be longer, and the clamps should be larger, so that they will go on the flasks, before their parts are brought close together.

3. *Cheoplasty.*

Dr. H. R. Smith said that two years ago all was alive with cheoplasty. Now the brethren seemed to be down on it, but he was going to try it. It had been highly recommended by members of the profession now present. Those who now advocate "rubber," once praised cheoplasty; and he had more faith in it now than in vulcanite.

Dr. Taft said he liked the cheoplastic work now as well as he ever did; and he presumed that it is now as extensively used by the profession as it ever was. It can be made in less time than rubber work, and would fit equally as well. He expected to use it in some cases, and found the metal very convenient, sometimes, in making apparatus to correct irregularity. In a large majority of cases he preferred other styles of work.

Dr. Atkinson thought that cheoplastic work would have been in better repute if it had, in general, been better made.

4. *Gold Work.*

Dr. Atkinson remarked that the principal difficulty with gold work, when the operator is competent, is that the shape of the mouth constantly changes. The extent and rapidity of change differ in different constitutions. He cited the case of a professional man who, on this account, had found it necessary to have his work re-made, eight or ten times, in twelve or fifteen years. This, he said, constitutes the only difficulty with this style of work which is not already well understood by the profession. The causes of this difficulty would lead into Histology, and take up more time than could be devoted to it now.

Dr. H. R. Smith hoped some one would say something in regard to the quality of the gold, and the proper thickness of plates.

Dr. Richardson thought the gold should not be reduced below 20 carats. If the mouth were healthy and would always remain so, 18, or even 16 carat gold might be worn without serious change; but he thought it should be borne in mind that even the most healthy are liable to sickness, and, consequently, to a change of the character of the fluids of the mouth. In some mouths, he said, American coin would tarnish. For such, he suggested the reduction of pure gold with platinum. A quantity of platinum, sufficient to give the requisite stiffness, could be added to gold without materially injuring the color of the plate. He spoke of the qualities of solders to be used on different specimens of plate. He uses a minute quantity of zinc in gold solders. In answer to an inquiry, he stated his doubts about the zinc being all burnt out in soldering, as claimed by some.

Dr. Woodward stated that when a gold plate springs, from excess of solder, he cuts away the excess, and makes a cove and die of lead and bismuth, and swages it down by a succession of light taps. But, he thought when plates were properly managed they were not likely to spring.

Dr. Richardson thought springing might result from a variety of causes, such as excess of solder, irregular heating, bad investing. The change, he said, was mostly on the sloping surfaces, inside of the teeth. Here, he said, is the weak point; and as the plate expands, while the plaster contracts, with rise of temperature, these have to bear the strain. The plaster should be mixed with sand and asbestos; and as little of the mixture should be used in investing as will hold the teeth in place; and it should be nearly disconnected over the palatine portion of the plate. The work should be heated uniformly; and a broad flame should be used till the solder begins to flow. When in a hurry, he usually puts the work in hot water, as soon as it is cooled below a red heat, and he had never broken a tooth by doing so.

Dr. Atkinson said that, when a tooth breaks by too rapid cooling, the cracks will be fine, and run in various directions—by too rapid heating, it usually breaks in a single direction.

Dr. Baxter has found but little trouble from too rapid heating. When he waits till his plaster investment is perfectly dry, his plate usually warps,—when he heats it right up, it does not. He solders the piece with lamp and blowpipe, without taking it from the furnace.

II. WHAT IS THE BEST TREATMENT WHEN THE PULP OF A TOOTH IS EXPOSED, IN ORDER TO SECURE ITS VITALITY?

Dr. Baxter said that, in recent exposure, if the pulp bleeds, he lets it bleed till it ceases of itself, and then fills with gold—sometimes inserting a little asbestos, as a non-conductor. He thinks that after the flow of red globules ceases, serum exudes, and renders the use of escharotics useless.

Dr. Focte was glad to hear that the gentleman avoids irritating the nerve. In slight and recent exposure, he would put in prepared flax and fill over it with Hill's stopping. After a while he would remove this, and fill with gold. Should there be soreness of the tooth afterward, he would use electricity. This, however, should not be applied to an irritable or inflamed surface. To illustrate,—If the elbow was inflamed, he would pass the current down the forearm, to the hand, but not through the elbow. To relieve tooth-ache, he would put the negative pole to the feet, and the positive to the upper part of the spine, and adjacent parts. The effect of an electric current, he said, was to increase the circulation; and this fact he regarded as important. He would relieve violent headache by the mode above described for toothache, and would even treat inflammation of the jaw on the same general plan. In none of these cases would he use a strong current.

Dr. McClelland said that when the pulp has been exposed for several days he does not expect to save it alive. When the fluids of the mouth had reached it, he did not think its vitality could be preserved by treatment, as he believed effusion would take place. To ascertain whether the pulp is exposed or not, he directs the patient to suck the tooth, which will produce pain in cases of exposure. In cases of accidental exposure, while excavating, he would wait till the hemorrhage abated, then wash out the cavity with tepid water, and fill with Hill's stopping. Sometimes he applied a little tannin. He was not very partial to treating nerves, though he had tried creosote lately. When escharotics are used, he thinks a dead portion must slough off, and that there will be effusion in consequence of this. His temporary fillings, as described above, he allows to remain some six months, before filling with gold.

Dr. Driggs inquired how it was to be known that exposed pulps remained alive after filling.

Dr. McClelland said he had found the dentine normally sensitive, when he removed his temporary, to insert permanent fillings.

Dr. BAXTER said he had seen a case in which the nerves were alive in roots of teeth, which had been pivoted for seven years.

Dr. WATT said that if the pulp was perfectly healthy it needed no treatment. If diseased, it might be benefited by proper remedial agents, just as other soft tissues. When the constitution was good, and the exposure but slight and recent, if he had the control of the patient, he would expect the pulp to be protected by a deposit of osseous matter, just as he would expect osseous union, in a case of compound fracture. He had expressed these sentiments before, and had no reason to retract them. He referred to a case of exposed pulp which he had treated with astringents, and filled over it with gutta percha. In two or three months the pulp was protected by a bony deposit, and the cavity was filled with gold. About a month ago one wall of the cavity was broken away, and it became necessary to refill. While excavating, the pulp was again exposed, and bled freely. An astringent was applied, and the cavity again filled with gutta percha. The tooth was comfortable a few days ago; and it is *expected* that the pulp will be reprotected by bony matter.

Dr. FOOTE said that when covered up in this way, there was no chance for a slough to escape; and he objected to the use of escharotics and leaving decomposing animal matter in the cavity. The condition of things in a tooth was very different from that in the general system when there was an early outlet to the surface.

Dr. WATT thought it was well known that the combinations of creosote and tannin with albuminous substances, were not "decomposing animal matter."

Dr. BAXTER preferred tin foil to gold, for filling over exposed pulps.

Dr. ATKINSON was sorry to hear the remark made awhile ago, that we have too much theory. There might be too much *speculation;* but of *theory*, we were far too scarce. Correct theory was, in its very nature, a safe guide in practice. His theory, verified by practice, was that a diseased pulp might be restored. He remarked there are different degrees of inflammation. When it had not gone beyond the adhesive stage, it required no treatment. If properly prepared, success would be the uniform result in such cases. In a stage just beyond this the pulp would be painful from congestion or irritation. Again, we would find it with the circulation almost choked off at the end of the fang, when the toothache will be violent. By applying creosote, and bleeding the pulp, the pain will be relieved. The vessels are now cut, and the question is, shall we seal them up, or leave nature to do it? He would let the pulp "drain;" and if, from capillary hemorrhage, a little dead matter is left, nature knows how to dispose of it. In the first and second conditions, exposed pulps might be saved under ordinary circumstances; in the last, they could not always, nor even generally. As to the treatment of diseased pulps, he had saved a tooth alive, after removing a plug and taking away a drop of pus from under it. He was aware they would call that "jumping a high fence, but he had jumped it." He removed an amalgam plug, inserted by a neighbor, which had been worn two years and a half. He found a gutta percha cap in the bottom of the cavity; and on raising it, he saw the pulp "alive and pulsating." He referred to the case of a man with naturally good teeth, with a superior canine decayed. In excavating he exposed the pulp, producing free hemorrhage, without causing pain. Neither the instrument, nor the pressure of cotton, caused any uneasiness. He applied creosote and a horn cap, and filled. Eighteen months afterward the pulp was dead. His theory was that no nerve accompanied that vessel which he wounded; and the system, consequently, did not know that it needed matter for repair.

Dr. Foote said that nature can do her work better than we can. He thought he had been misunderstood. He would let the nerve alone, as to treatment, cover it with a nonconductor, and let nature heat it. Tole causum, he would remove the cause. Would not object to general, but would to local treatment.

Dr. TAYLOR said he wanted to get back to first principles. He agreed with the President, (Dr. Atkinson), as to the conditions defined. He would inquire of Dr. Foote, if he would leave an ulcer on the finger to nature. Dr. F. said he would not apply escharotics to an ulcer there or any place else.

Dr. ATKINSON thought Dr. F. had not treated many cases of primary syphilis.

Dr. FOOTE said he had treated a considerable number.

[Drs. A. and F. were formerly general practitioners.—REP.] Dr. TAYLOR, resuming, said that if the exposed surface of the pulp was in a state of ulceration, the tooth could not be filled without treatment; and he was aware of no physiological or pathological reasons why an ulcer might not heal here as well as in other soft tissues.

Dr. BAXTER had used quinine, as a local application to diseased pulps, with good results.

Dr. McCLELLAND thought there was an analogy between the treatment of exposed pulps and that of the canals, or rather that portion of the nerve at the apex.

Dr. FOOTE said he rose to an explanation. He did not try to save a pulp when ulcerated.

Dr. TAFT said that when the exposure is recent, the orifice small, the constitution good, and no local irritation present, he would certainly expect to save the pulp alive. In some cases, however, even when the exposure is recent, and there is no inflammation, difficulty will arise, notwithstanding the pulp may be protected by a nonconductor. He had tried the application of nitric acid to the exposed point; and when this is done, the tooth can be filled with gold, as if no exposure had occurred. He had tested this practice for the last fifteen months, and was satisfied with its success. He had teeth die, sometimes, by the old plan; but had lost none that he knew of by this, when the circumstances were at all reasonable. It would sometimes do to leave the case to nature, after neutralizing, or removing the irritating agent; but, in many cases, this would not answer. Medication is sometimes demanded; and medicines would act here as in other cases, or as on other soft tissues. There might be a discharge from a diseased surface capable of keeping up irritation, by the arrest of which, the health of the part would be promoted. The circulation, he said, could be increased, and all the vital forces could be aroused in the pulp, as in other parts.

Dr. RICHARDSON asked if he had ever seen granulations on the surface of an exposed pulp.

Dr. TAFT, resuming, said he had seen purulent discharges from the surface of the pulp, and had seen such surface restored to health. He might judge for himself whether or not granulations had taken place.

Dr. FOOTE said he would agree that he would treat an ulcer of the pulp as an ulcer on another part—would not use caustics, but rely on cleanliness and general treatment. He would like to know how we are to distinguish a tooth that will get well without treatment from one that will not.

III. FILLING TEETH.

Dr. FOOTE recommended the use of spunk, for drying cavities and for surrounding the tooth while filling. He said it was a good absorbent; and, as it is blackened by the absorption of moisture, it is easy to tell when the fluids of the mouth have nearly reached the cavity.

Dr. ATKINSON remarked that the public appreciates the operation of filling better now than formerly, because it is better performed and because we know better how to perform it. Every filling ought to be a unit. To accomplish this, the gold should be adhesive. As to manipulation, his "darling method" was to condense with the mallet. The desired condensation, he said, could be attained more perfectly, quicker, and with less pain to the patient than by the ordinary mode. He was sorry to say that but few understood fang filling. To do good work the operator must be able to see into the fang cavity. No difficulty need be experienced in getting to the end of the palatine fang of an upper molar. If a tooth still retains one third of its normal periosteal attachments, he thought its vitality could be preserved by judicious treatment. He referred to a case in which a young dentist applied arsenious acid to the pulp, and filled over it with amalgam cement. Abscess, both on the palatine and buccal fangs resulted. The patient wished to have the tooth extracted, but being a first molar and consequently one of the most important teeth, he undertook to save it. A probe would readily touch all the fangs, the substance between them being lost. He took out the amalgam, washed out the tooth with water and creosote, and with tincture of arnica, removed the arsenited pulp, kept fistula through the gum open, cleansed out the canals carefully, and treated them with creosote, and, when the tooth was no longer painful under pressure, he filled it. He kept the fistula open till the discharge became limpid, when he allowed it to heal, which it did in a few days. In answer to a question, he said he would "mallet the fangs, too." He described, by diagrams on the black-board, his mode of filling an upper molar, the decay being on the posterior approximate surface, and the pulp dead. He would chip out the grinding surface with mallet and chisel, till he could get into the fangs. He would insert a wedge between the necks of the decayed tooth and the one posterior to it, to keep away the gum, and to press the teeth apart, to allow space and material for a proper finish. He would, when properly prepared, fill the fangs, and then the main cavity, restoring to the tooth as nearly its original shape as possible. This restoration of shape he regarded as very important. He prepared his gold by rolling it into loose ropes, and cutting it into pellets, or blocks; and in filling, he passes each pellet through an alcohol flame, just before putting it into the tooth. By request of Dr. Taft, he referred to the formation of new alveolar process, and described two cases, in one of which new process was formed from one canine to the other,—in the other, the gum and process were destroyed by caustic potash, and, in time, restored. The new process, he said, would not be as sharp as the natural formation. In treating a case with a view to the formation of new process, he kept away irritants, and used, locally, tincture of iodine, creosote, and tannin.

IV. IRREGULARITIES OF THE TEETH, THEIR CAUSES AND MODES OF TREATMENT.

Dr. ATKINSON thought it important to let the fangs be fully develped before the process of regulating is commenced. He described, by diagrams, his various modes of operating; but without these it would be impossible to do justice to his remarks.

[The further discussion of this subject was somewhat conversational,—cases and appliances being exhibited and discussed with freedom. All seemed both instructed and delighted. This, the most interesting part of the proceedings, can not be put on paper. We wish our readers could have been all present.—REP.]

V. STRUCTURE AND NUTRITION OF THE DENTAL TISSUES.

This subject was laid over, by a unanimous vote, for consideration at the next annual meeting.

VI. HEMORRHAGE FOLLOWING THE EXTRACTION OF TEETH, AND THE BEST TREATMENT.

Dr. McCLELLAND referred to a case of hemorrhage after the extraction of a lower wisdom tooth. He used pressure and the sesquichloride of iron, with success. He left the pledget in, till it came away of itself. Another case, a young man, bled six hours. He succeeded by the same treatment. He relied on pressure, and the sesquichloride, which combines with the blood. He would advise hemorrhagic patients to avoid exercise. Before he adopted the sesquichloride, he used turpentine and tannin as a styptic.

Dr. Driggs said his treatment was much like Dr. McClelland's, except that he seldom used astringents. His main reliance was on pressure by packing the cavity.

Dr. Watt said the treatmont of hemorrhage may be either local or constitutional, or both. Many practitioners, he said, had indefinite ideas as to the action of styptics. A true styptic would combine with some constituent of the blood and form a solid compound insoluable in the blood. Hence, nitrate of silver, and kindred salts, though often used as such, were not worthy to be ranked as styptics. The sesquichloride of iron, or, as it is often called, the perchloride, is a powerful styptic, and so is the persulphate of iron. Tannin, he said, was also very reliable. Any one of these, aided by pressure properly applied, would afford us all we could expect from local treatment. Acetate of lead and opium would often prove useful in treating the constitution. When it is known that the patient is predisposed to hemorrhage, the constitution should be treated before the tooth is extracted.

Dr. Richardson said the effect of local treatment would depend very much on the state of the blood, as to quantity and quality. If the patient were plethoric he would deplete. As to pressure, it could sometimes be best applied by the adaptation of a plate to the parts. He referred to a case, in which he was convinced that the hemorrhage was vicarious; and he referred it to a physician.

[Here the regular discussions ended; but the members still lingered and continued to exchange ideas on various practical subjects. We hope many will be present to hear and take part in the discussions of No. 5, next year, as well as to aid in and enjoy all the proceedings of this pioneer Association.] W.

Editorial.

"PRACTICAL HINTS."

The first article in the March No. of the Cosmos, entitled "Practical Hints"—by J. D. White, contains some rather peculiar ideas upon a very important operation, namely the method of plugging the roots of teeth. Dr. W. remarks: "In recent cases, there is frequently a fragment of the blood-vessel and nerve left in the lower third or fourth of the fang, out of the reach of our instruments, and to thrust the gold against this, would be to excite inflammation of the external periosteum." This is very true, but it is equally as true, that inflammation of the periosteum will occur, if a space is left in the canal, between the filling and the remaining portion of the pulp. In the great majority of cases, that space will be filled by a discharge from the nerve, and this will produce equally as great difficulty, as though the gold were in contact with the living fragment; if any portion of the canal is left unfilled, it might as well all be so. "We never enlarge the natural canal of the fang, to follow a pulp, to the apex of the root." Then we think you fail in some cases, to do your duty. We think the true method in all such cases, is to remove all remaining portions of the pulp. The fact that we can not with the usual instrument reach a fragment of pulp through the canal in the natural condition, is no argument why it should not be removed; it would be just as admissable to leave a portion that could be approached—almost every canal may be so enlarged, that all fragments of the pulp can be removed to the termination of the canal. Every such fragment of a pulp, has lost its function, and can not with impunity remain. Nature endeavors to throw off every such part. We do not think that nature will take care of such a part better than we can.

How will nature take care of it? What will she do with it? Well in nine cases in ten it will slough off, or constantly discharge pus, and the vacuum be filled up with vitiated matter that will produce irritation, inflammation and abscess. Now if the canal was entirely filled, nothing of this kind could take place, from this cause at least. The Doctor proceeds to describe his method of filling fangs, which probably in his hands is very good, but one thing is very clearly set forth, that is, that he makes provision for ensuing trouble. This is probably a very wise arrangement ; considering the treatment he gives the fangs. We should expect if we treated fangs in the manner he describes, to remove the fillings from almost all the roots, and we think his precaution to put his plugs in so he can pull them out, a very wise one. But it would certainly be far better to treat the cases in such a manner that no such necessity would arise.

"There are other methods of introducing gold, but as we never resort to them, it is useless to enumerate them." What a sentence ! If *some* men had used this language, we should say it had a sprinkling of egotism. Is it possible that any method, "we never resort to," is not worth enumerating? Do "we" practice the only method that is worth any thing? Are those plugs that can be stuck in, and pulled out at pleasure, the only ones worth referring to? We would suggest, that you might "enumerate" some other methods, and then "resort" to them, (especially in the treatment of fangs) without suffering materially thereby. Again : "We never attempt to plug the roots of molar teeth, unless we can get into them with facility, except it is in old cases where the crowns are broken away." How is this? Never attempts to plug the roots of molar teeth he can't get into with facility, except in old cases where the crowns are broken away ? Now this is either funny or ridiculous, we are not certain which. Why sir, you can get into the fangs of any tooth and with facility too, if you pursue the proper course. We do not exactly see the propriety of filling the roots of old cases, where the crowns are broken away, whether they can be approached with or without facility. "We content ourselves with filling the bulbous portion only of the pulp cavities ; it is in front teeth, canines and bicuspids that we are careful." You only fail in not adding the molars to this list, you had better be "careful" with all the teeth, and especially with molars having good crowns, as well as in the old cases where the crowns are broken away.

We refer to this article of Dr. White's because we consider it radically wrong in its teachings, and one calculated to lead young members of the profession into error. It will never injure any one who has adopted the right principle, and carried it into practice, but it is those who are seeking the truth, that are liable to be led astray. T.

OS-ARTIFICIAL.

This preparation for filling teeth has been before the profession for some time, though not very extensively tried. We have been for sometime using this preparation as prepared by Dr. C. H. Roberts, and it accomplishes more than we had anticipated; we deem it proper to refer to some of its more prominent features. And first, it seems to be well adapted for temporary fillings, whenever they are required. It will serve a good purpose for filling the deciduous teeth. It is the best preparation we have seen for temporary filling where there is sensitive dentine; it protects the cavity effectually, and the caustic property reduces the sensitivenesss. From one to five days, according to experiment, will be quite sufficient with a filling of this kind to render sensitive dentine sufficiently normal to receive a gold filling. It is sufficiently a non-conductor for this purpose.

Again, it is valuable for filling teeth that are very much decayed, and for building up crowns that are partially broken away. It is valuable in this respect only, for molars and bicuspids. The crowns of the teeth may be built up to their original size and form. Of course it will wear down with more or less rapidity, according to the force with which the teeth are used, but it seems to be sufficiently firm to wear for a considerable time probably from two to five years. It attaches itself to the walls of the cavity, so that it will remain till it is either cut or worn away—will not come out in pieces. It is not necessary to make retaining pits for it, nor even to have the cavity of a general retaining form, for it adheres sufficiently firm to retain its position without. It may be used in the preparation of a root that is much decayed, for the reception of a pivot tooth; it may also be used for attaching the gums of teeth, which may be accidentally broken from an artificial denture. Notwithstanding we think it a good thing, there are some points about it which need watching. The fluid is very caustic, and if it comes in contact with the soft parts, before it is thoroughly combined with the powder, it produces a very unpleasant taste and a painful sensation, and cauterizes the surface. We think it would not be proper to fill a tooth, the pulp of which is exposed, with it, if we wish to preserve its vitality, without at least placing a shield over it, though in this particular we have not much experience.

It can not in any case be recommended for permanent fillings. It should not be used to fill ordinary cavities that can be filled with gold. The method of applying it is very simple, and is fully described in the directions accompanying it. It is worked in with a fine sharp pointed spatulæ, having about the consistence of putty. The cavity should be thoroughly dried, and the filling after being introduced should be kept free from moisture from five to twenty minutes ; a jet of warm air facilitates the hardening process. Time and experiment only, can test its value. T.

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SCIENTIFIC ARTISAN.

This publication, to which we have before referred, is one which we peruse with a great deal of pleasure and profit.

The subjects discussed, explained and clearly set forth, are such as are, or should be highly interesting to all who feel any interest in the various departments of science, art and agriculture. It enters freely and fully into the subjects involved in these three departments. No one who desires to keep posted in these various departments, (and who should not?) can afford to be without this or some similar publication. Every one, whether a farmer, a professional man or day laborer, may by the weekly perusal of such a paper, in a very little while become an accomplished scientifician. He is constantly attaining knowledge which he can make tributary to his every day operations. The subjects are treated so familiarly that the ideas can at once be comprehended and applied to practical purposes.

A common fault with most of our scientific works is, that the ideas are so loaded down with verbiage, that it costs as much as they are worth to dig them out, but a reform is taking place, and we are pleased to see the Scientific Artisan leading the way.

Justice requires us to say, however, that the Scientific American is going hand in hand with the Artisan. No physician, or lawyer, or minister, or dentist, or mechanic, or farmer, or day laborer, can afford to be without such a paper as the Artizan, if he desires to know what is going on in the world of art and science—and all should know. T.

CINCINNATI DENTAL SOCIETY.

The regular monthly meeting of this society was held on Tuesday evening the 13th of March, at the office of Drs. Wardle & Doughty. Quite a number of the members of the profession in the city, were present. This being the regular time for the election of officers, they were chosen for the next half year. There was no essay read, the essayist not being present.

The topic for discussion, "Hemmorrhage after extracting teeth, its causes, nature and treatment," was taken up, and the views of the members pretty fully given—the discussions we will probably give in the next number of the Register. Some new and interesting ideas were elicited. Two or three particulars in regard to modes of practice were referred to.

Drs. H. R. Smith and T. F. Davenport were appointed essayists for the next meeting.

Filling teeth is the subject designated for discussion. We expect to get something new on this important subject. We hope the committee on the tobacco question will be ready to report.

The society made an appropriation of twenty-five dollars to aid in the purchase of a microscope in connection with the Mississippi Valley Association.

Adjourned to meet at the office of Drs. Taft & Foote, the second Tuesday in April, at 7½ o'clock, P. M.

All members of the profession are cordially invited to attend.

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Cleveland, Ohio, March 6th, 1860.

In answer to a call, the nucleus of Northern Ohio Dental Association, formed last May, met at 2 o'clock, P. M., March 6, for organization, adoption of a constitution and rules of regulation.

After the object of the meeting was stated by the chairman, Dr. B. Strickland, on motion and by a unanimous vote, several others who had been invited were elected to take part in the organization of a society to facilitate professional intercourse.

After which a constitution and a code of by-laws, were presented, read, and after slight modifications were adopted.

On motion the association then proceeded to the election of officers for the ensuing year, which resulted as follows:

Dr. B. Strickland, President, Cleveland, O.

Dr. H. P. Hunting, Vice-President, Painesville, O.

Dr. C. R. Butler, Recording Secretary, Cleveland, O.

Dr. B. F. Robinson, Corresponding Secretary, Cleveland, O.

Dr. F. S. Slossen, Treasurer, Cleveland, O.

Drs. W. H. Atkinson, Cleveland, O.; C. Palmer, Warren, O.; B. H. Spelman, Ravenna, O., Examining Committee.

On motion, the Secretary was instructed to send a synopsis of the proceedings of the meeting for publication.

Adjourned to meet in Cleveland, the first Tuesday in May, 1860, 7½ o'clock, P. M. C. R. BUTLER, D. D. S., Secretary.

LITTLE MIAMI RAILROAD.

This pioneer road continues to be a universal favorite. We give below the time of the arrival and departure of its trains, for the convenience of those of our readers who may desire to travel on it.

Fewer accidents have occurred upon this road than upon any other with which we are acquainted. This is the result of its superior management.

Regular Passenger Trains Leave—10 A. M., Day Express; 4:40 P. M., Accommodation; and 11:30 P. M., Through.

Regular Passenger Trains Arrive—7:30 A. M., 1:25 P. M., and 10:45 P. M. Makes regular connections with the Hillsboro' Road Loveland, and the Wilmington and Zanesville Road at Morrow.

BACK NUMBERS.

We wish to procure a few copies of the first number of Volume XII., of Dental Register, (September of 1858.) We will pay $1 00 each, for a few copies. Any person having this number and willing to spare it, will please mail it to the "Dental Register of the West," Cincinnati, O., with their name and place written upon it, that we may know from whom it came. T.

THE
DENTAL REGISTER OF THE WEST.

VOL. XIII.] MAY, 1860. [No. 11.

Original Essays and Communications.

PATHOLOGY OF THE MOUTH.

ACUTE CATARRH OF THE MOUTH.

THE phenomena of catarrh in the mouth are plainly exemplified in the well known symptoms of what is commonly called "a cold in the head," or in influenza. Catarrh is by no means confined to any locality, it may be manifested in any portion of the mucous membrane, but is more disposed to attack such portions of the mucous tissue as are exposed to atmospheric or other injurious influences. Perhaps the lining of the respiratory organs are more liable to this form of disease; next, the lining of the alimentary canal; then, the lining of the genital organs; and lastly, that of the urinary organs.

But frequently only parts of the mucous membrane of those systems are affected with catarrh, or different parts of it are affected with the disease in different degrees of intensity. The mouth, being connected with both the respiratory and the digestive organs, is liable to become diseased in connection with catarrh of either the lungs and the stomach, and hence catarrh of the mouth is a somewhat common form of disease.

The phenomena of a catarrh, and the conditions that produce those phenomena, wherever the disease may be located, are :—

Firstly. Congestion of the vessels of the mucous membrane and the immediately subjacent structures, identical in character with the congestion that is present in phlegmonous and fibrinous exsudative inflammation but without the throbbing and pain which occurs in congestion without those exsudations. For, as the exsudation in catarrhal inflammation is mucus, and the mucus formed is thrown *out* of the membrane and organ affected, it can not cause that obstruction to the flow of blood through the arteries that fibrinous exsudation does, and which is the cause of the throbbing, heat, and pain, felt in some forms of inflammation.

Secondly. The secretion of the part affected is first and briefly diminished; but quite soon it is greatly increased. In fibrinous inflammatory exsudation, as the amount of fibrine exsuded into the organ is increased the excretion of mucus is diminished.

Thirdly. Not only is there an alteration in the quantity but also quality of the fluid exsuded, and that change in quality is quite different in different localities. In nasal catarrh, in place of the usual pituital mucus there is frequently thrown out a watery, saltish, serous fluid that excoriates the skin over which it flows, dissolving and washing away the epithelium and epidermis and leaving the dermis exposed to the action of this fluid and to the oxygen of the atmosphere. At another time a thickened mucus will be poured out in considerable quantities, with its color altered from the pus globules and the vast number of detached epithelial scales it contains together with shreds of detached epithelium, and occasional flakes of fibrine. In some forms of febrile gastric catarrh there is a formation of imperfect epithelial scales in very large quantities. This condition when in the stomach is indicated by a *yellow* coat upon the tongue, a bitter taste in the mouth, and an unusual adhesiveness of the coating to the tongue.

There are three prominent forms of catarrh, each perhaps shading towards, and perhaps running into the other. They are those here indicated; or the *Serous*, the *Muco-purulent* and the *Epithelial* forms of the disease.

Serous catarrh is not often observed in the mouth, but at times the amount of *Mucus*, or a *Muco-purulent* fluid poured out into the mouth is very great. At such times the mouth appears to suffer from a derangement very similar to that of common inflammation. The tongue is white, not very heavily coated, at first moist or even wet, but toward the later stage of the disease frequently quite clean. The mucus poured into the mouth is swallowed, and is, together with the gastric mucus, often vomited in large quantities, or is passed from the bowels in thick stringy lumps. As the febrile symptoms that accompany this form of catarrh are apt to be remittent, this disease has been known as "Gastric Remittent Fever."

Epithelial catarrh of the mouth appears always to be connected with a similar catarrh of the stomach. It may be distinguished by the thick, heavy, yellow coat on the tongue, the bitter taste of the mouth, and the tenacious adhesiveness of the coating. Also by the stomach being incapable of digesting food, its being irritable, and quite apt to vomit its undigested contents. When there has been considerable retching, produced by the disease or by a nauseating emetic, large quantities of bile will be drawn into the stomach, which may be vomited along with the ropy tenacious mucus excreted by the stomach and swallowed into it from the mouth. If the bile is not vomited up it may pass off in considerable quantities by stool. This condition of the system has been expressed by saying the patient had a "Bilious attack."

The more common *cause* of these forms of buccal and gastric catarrhs is,—an *arrest* or partial arrest of the usual excretion through the skin. The perspiration is diminished or ceases entirely, the epidermis is not as freely shed and renewed as is necessary for health, the head becomes dry, and the skin on the hands is liable to crack. We know that those who labor under an abnormal excretion from the bowels, as in chronic diarrhœa, and from profuse, long-continued leucorrhœa, or from the profuse expectoration of consumption, have transparent skins and clean scalps; and we are justified in inferring that a suppression of the natural dermic secretion is often if not always the cause of buccal and gastric, as well as pulmonic and intestinal catarrh.

Fourthly. In catarrh, the nerves of the sub-mucous tissues are affected so as to produce the prickling sensation in the nose, the cough in pulmonary catarrh, the vomiting when the stomach is the seat of the disease, and the diarrhœa when the intestines are the organs affected.

Fifthly. There is a marked periodicity observable in all forms of catarrh wherever located. The febrile and catarrhal symptoms are less in the morning, and always grow worse towards evening. The disease, like the exenthemata when uncomplicated, ends within a few days.

Treatment.—The first thing to be attended to in all forms of catarrh, is to insure a free exit to the mucus from the system. From the mouth it is usually swallowed into the stomach. In the lungs if allowed to accumulate, or checked in its flow by the use of opiates, the patient certainly suffers. In the stomach and bowels, the mucus provokes vomiting or diarrhœa, and it is never well to arrest these entirely so long as the inordinate secretion continues. It may even be necessary to give emetics, but more particularly mild cathartics, to aid in expelling any accumulation of mucus. In epidemic catarrhs, mild warm purgatives with sudorigentic agents, are all the medicines physicians are called upon to administer.

Even when the patient is quite debilitated, mild but efficient measures should be taken to dislodge and evacuate any considerable accumulation of mucus, and if cautiously managed, the patient will feel stronger for having been relieved of the load that was weighing him down. When the stomach is thus embarrassed, it can not absorb food or medicine. But when it has been emptied of its thick layer of tenacious secretions, both medicine and food can be taken with benefit.

As an emetic in this disease, the common table salt, to induce free osmosis of the watery position of the blood into the stomach and detach the adherent mucus, will be found very beneficial. Vinegar in proper quantities is found to be an admirable solvent for the mucus, and as an astringent it checks its flow. An infusion of hydrastis Canadensis root, to be taken whenever the tongue or stomach have been cleansed so as to allow it to come directly in contact with the mucous coat, is a very superior article.

The bowels should be moved with the mildest and most gentle cathartics, mixed with a little bicarbonate of potassa, or with the chlorate of the same alkali.

In all forms of catarrh there is an unusual amount of excretion of the fluids of the body, and plenty of water in some form must be given to supply the waste. The thirst that is a usual accompaniment of catarrh is a natural instinctive one, and should be gratified.

Diet.—As there is a diminution of the digestive power, as well as an increased demand for fluids, liquid foods are found to be far preferable to solid ones. Solid meats should not be given to patients suffering from catarrh, but animal food in the fluid forms mentioned while treating of *Arrested Secretion*, will always be found beneficial. Especially should the food be suspended in considerable water in the epithelial form of the disease.

CHRONIC CATARRH OF THE MOUTH.

This form of disease, especially when the mucous membrane of the fauces, throat, and stomach are involved, in addition to that of the buccal cavity, is often known as "mucus flux." Although closely allied in nature to acute catarrh, it does not appear to be the result of the acute form of the disease.

In chronic catarrh of the mouth and stomach, the tongue is smooth, glazy, and wet, with a quantity of white epithelium spread over the tongue and the lining of the cheeks.

Although this coating of epithelium is never very thick it is sometimes remarkably white.

Chronic catarrh does not, like the acute disease, tend to a speedy termination; but in spite of treatment, it at times will progress from bad to worse; or if apparently improving for a time, will grow worse again, and perhaps linger for years a constant torment to the sufferer.

Not only is the mucus increased in quantity in chronic catarrh; but as shown when speaking of the acute disease, it is also changed in quality, becoming tough and more than naturally adherent to the parts to which it is attached. It hence acts as a foreign substance, enveloping the food, impeding the flow of saliva and the gastric juice, and covers over the lymphatics and veins as well as the mucous membrane and thus hinders the absorption of food and drinks. As the food is not properly acted upon by the saliva and gastric juice, and is not readily absorbed, it undergoes fermentation and putrefaction in the stomach, and thus generates morbid acids and morbid gases, and causing uneasiness, distress, and not unfrequently severe pain in the stomach and bowels.

As the excessive vitiated mucus, and undigested, fermenting, putrifying food descends into the intestines, it causes constipation, griping, colic, and is finally evacuated in hard lumps covered with slime.

Mucus as has been shown, and especially the secretion of the mouth, is alkaline; and as it passes into the stomach in large quantities it neutralizes the acid natural in the gastric juice and renders that fluid incapable of digesting solid animal food. It also, by preventing the fluid being digested in, and absorbed from, the stomach, favors the formation of the acids of fermentation in the bowels.

As the stomach contains more mucus than usual and hence its contents are rendered alkaline, the alkalinity of the blood may be no greater, and perhaps be even less than that of the contents of the stomach, and thus the osmotic circulation may be outward into the stomach instead of into the system, and in this way catarrh of the mouth and stomach may cause a serous diarrhœa.

When there is an arrest of the secretion of gastric juice, as here indicated, and albumenoid food is eaten, the albumen is not digested, and passing into the intestines, sulphureted hydrogen gas is formed giving the very offensive odor to the gaseous eructations and the gas passed out of the bowels; and also, if it is absorbed into the system, poisoning the fluids, depressing the vital energies, and finally escaping through the lungs and skin and rendering the breath and cutaneous exhalations quite offensive.

Starchy and saccharine foods can be digested in small quantities: but if taken in larger amounts than can be digested, and especially if mixed with animal food, the mass quickly undergoes decomposition and causes distress in the various ways here described. Or it may quite soon be vomited from the stomach along with the mucus.

If much mucus is vomited from the stomach after a meal, it is always alkaline; but if the food has been in that viscus long enough to become fermented, the liquid will be quite acid, causing acid eructations so acid as to set the teeth on edge and fill the room with a powerful penetrating odor of acetic acid. At times there will be observed lumps of alkaline mucus floating in the acid fluid vomited up.

The *Treatment* already detailed as applicable to acute catarrh of the mouth, will be found useful in the chronic form of the disease. Chlorate of potassa, hydrastis Canadensis, asarum, and other medicines found to be useful in inflammation of the mucous membrane, may be applied in the form of gargles and lotions. Sometimes the vapors of medicine seem to be more efficacious than the infusions or solutions.

The peculiar derangements pointed out as the results of the disease, will each demand its own peculiar treatment, which may be adopted in conjunction with that directed to the original malady.

THOUGHTS ON DECAY AND ITS TREATMENT.

BY GEO. S. FOUKE.

WE have suggested to the profession the following names for the stages of dental decay, namely, *Epienamel* and *Subenamel* decay; and *Epidentinal* and *Infradentinal* for decays existing on or in the dentinal tissue. We would express a decay reaching to the living membrane of the pulp by the term *Subdentinal*, which would make the nomenclature complete, and render the vague terms "superficial" and "deep-seated," obsolete as dental technicalities.

Dental decay is a subject that should be constantly kept before the professional mind, and also, on account of its *humanitarian* aspect, in the professional *heart*. *To save* the natural teeth should be the mighty mission of dental science and art. Let the subject of decay of teeth and its treatment be agitated, and let it be presented to the consideration of all in every light of which it is capable of being presented. Every ray of light, every particle of truth upon this important and intricate subject, is earnestly craved by those among us who have "honest hearts and noble spirits" animating their bosoms. Even though we have no *new* ideas, no *startling* discoveries to herald forth, let us *counsel* together and animate each other to our utmost in perfecting ourselves for the proper discharge of duty in the treatment of the natural organs. Is the true *nature* of decay fully comprehended? Is it clearly understood? Or is dental *decay* yet an *enigma?* If we say, *oh yes*, decay is "*a chemical phenomenon, the causes of which are all*, and *always, apart from life,*" does *this* strip the "protean disease" of all complexity? of all mystery? If we say, certainly we understand what *decay* is,—it is a "*chemico—vital phenomenon,*" it is a *disease*, the *cause* or *causes* of which are constitutional and chemical, are we much better off? Have we divested the "fantastic disease" of its intrinsic obscurity? Have we removed the difficulties attending its study and its management? Ah, no.

Whether we be *doctors* "puffed up by our collegiate pride;" or whether *professors* "sitting on our scientific thrones;" whether we be *practitioners*, "humble and lowly," we are all put to our *wit's end* to comprehend all the phenomena we meet with in our observations of the "disease singularly called Caries," and we all have the mortification at times to see that our most skillful efforts are abortive in their attempts to arrest and conquer the forces of the "Enemy!"

We are yet *pupils* seeking knowledge on this great subject. We deprecate "false doctrines." We would be free from false opinions. These often lead us to "injurious operations and to inefficacious treatments." We dislike vague words—hate loose language—loathe careless terms: these often generate and foster false doctrines and erroneous opinions. We are wedded to no "varieties." We *would be* wedded to no "absolute affirmations." We give up cherished *species*—be they "twenty," or be they the lingering "three," *black*—*brown*—"*and then white*." We *would be* given up to no "*single cause—the action of one or several acids*." *Whatever* "the destruction of a tooth is due to," that we want to know—*whatever* the salvation of a tooth is due to, that we want to do! Brethren, let us try to help each other to the attainment of these "*whatevers*."

If decay has not its several varieties or its distinct forms, it has its several stages and its distinctive conditions. Each and every case of decay is a problem to be solved—a theorem to be demonstrated. The dentist must therefore be somewhat geometrical. He must understand his *propositions* before he can enunciate them or demonstrate them. He must be well versed in all *definitive* and *axiomatic* principles. He must be familiar with, and appreciative of, all *points*, *planes*, *angles*, *circles*, *cubes*, *squares*, *polygons*, *cylinders*, and *solids*. He must define clearly where "superficial" decays end, and where "deep seated decays" begin. He must study the *conditions* of the disintegrated tissues. He must settle the "quality" of the *integrate* tissues. He must define the metes and bounds of every thing comprehended in, and essential to, a perfect demonstration of the problem or theorem proposed. *Then he demonstrates!*

The primary or first stages of decay are *epienamel* and *subenamel* decays.

Enamel decays might be with some propriety distinguished as *true* and *false* enamel affections. For instance, a decay may have the outward appearance of being purely epienamel, but close inspection discloses the fact that the subjacent dentine is materially involved. This would be the case in all likelihood where the weakness and susceptibility of the dentine constitute a predisposing condition of that tissue. Again, the surface or even the body of the enamel may be materially affected, and yet the dentine and also the integrate portions of the enamel, be found firm and healthy. This condition of an enamel decay might be distinguished as *true* or *pure* enamel decay, whilst the former condition might be distinguished as *false* enamel decay.

Incipient *true* enamel decay is a mere *roughening* of the epienamel. If this incipient evil were not so much neglected, numerous cases would necessarily be presented for treatment, and they could be very effectually *nipped in the bud* by the simple operation of *filing*. Persons understanding true dental *economy* do not neglect these primary wants of the teeth. Prejudice against the *file*, and sheer ignorance cause many to neglect their teeth, until decay has well nigh consummated their destruction. This is a good thing for the "*tooth maker*," but it is death to the teeth. *Verbum sat sapientibus.*

Looking over our *case book* we count up *eighteen* teeth filed for *true epienamel* decay in the past *twenty* days, which is about the average of our ordinary experience in such decays.

We will enumerate them: Miss E. R., age 15; proximals of four upper incisors. Texture of enamel excellent—no question as to success. Miss B. S., age 13; all proximals of upper incisors, except those between the centrals which are plugged. Enamel in this case was pretty good. Decay obliterated entirely—consider the teeth safe. Miss M. S., age 18; one upper incisor filed and left sound. Miss W. R., age 22; one canine tooth above and two lateral incisors. Some teeth we plugged—found dentine only tolerably resistant and firm, yet strong hopes of success. Mrs. W., aged about 28; filed two lower bicuspids, and left the teeth in a very favorable condition. Mr. N. G., about 35; filed one upper second bicuspid for *infradentinal** decay, and the adjoining first molar for true epienamel decay. This gentleman has teeth of the finest possible texture. Miss M. N., age about 17; filed two superior incisors, the teeth being of a brittle structure, yet the case promises success. In this time we treated the incisors for Miss T., age 12, for *false* enamel decay. Also the incisors for Master N., age 15, for the same. In each case, the parties concerned thought "*cleaning*" was all the teeth needed. The *enamel* was apparently unaffected, but *subenamel* and *epidentinal* decay existed which we treated.

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* We mention the filing of this *bicuspid* here, for *infradentinal* decay, to observe that Mr. G. objected to our filing his teeth. He told us he once had a lower jaw tooth filed and he could never afterwards eat on that tooth in consequence of the food's pressing on the gum, which became so annoying to him that he had the tooth extracted. He feared the same result if we should file these teeth. The condition of the bicuspid and the first molar was such, however, that plugging was out of the question. The teeth were in close proximity. The molar was slightly decayed far up on the palatine approximal angle, and the bicuspid was decayed from angle to angle on the post-proximal surface, leaving thin fringes of enamel around the broad cavity. The bottom of the cavity was hard and firmly consolidated dentine. We explained to Mr. G. the difference between a V-like cut and the cut we proposed to make, and assured him that his gum should be protected. He consented to our filing, and we accordingly filed the bicuspid so as to leave the buccal angles of the two teeth as near together as possible, the space widening towards the palatine angles. The grinding surface of the bicuspid was preserved as much as was possible, sufficiently so indeed to prevent particles of food of a size that could annoy from being compressed or rammed up against the gum.

TO BE CONTINUED.

CASE OF ARSENICAL POISONING.

REPORTED BY G. S. FOUKE.

Miss M. E. S——n, a petite and lovely young lady, in her seventeenth year, came to us at Westminster, Md., on the 11th of February, 1860, to see what could be done for two of her teeth,—the upper right central and lateral incisors.

A dentist, from Pennsylvania, being in her neighborhood, (Wakefield, Carroll county, Md.,) driving the important business of "fixing teeth," Miss S. was induced to employ him to plug the teeth named above.

Miss S. possesses good teeth—these two being the only ones decayed. The central incisor was plugged on the post-approximal, and the lateral on the ante-approximal side. Inflammation supervened soon after the operation, and the face swelled to a great extent. Dr. Cooke, the family physician, being called, succeeded in subduing the alarming symptoms; but the teeth and gums continued in a very unpleasant condition. Over four weeks after the teeth were filled, Miss S. came to see us. We found the gum in front very much thickened, puffy, and of a dark or livid hue. From an unhealed wound, pus was oozing quite freely. The teeth, very loose, and projecting from the sockets considerably. The probe showed that the entire alveolar process was obliterated; and that there was, at the anterior base of the process, an exfoliation, extending from the canine fang to the extremity of the fang of the left central.

The injury was now irreparable. The teeth being processless, and the existence of an exfoliation at the extremity of the roots, rendered the removal of the teeth necessary.

The plugs were removed, simply to see the condition of the cavities. The central incisor was decayed only *epidentinally*. The lateral was decayed *subdentinally*, the pulp cavity exposed at a small fissure-like opening. The pulp cavity contained the remains of the deadened pulp.

In our examination of the case, the idea struck us that *arsenic* must have had something to do in the production of this extensive destruction. We inquired of Miss S., whether she had any knowledge of what the dentist did to her teeth preparatory to plugging? She immediately remarked that the dentist put in her teeth, the day before he filled them, "rats-bane mixed with some oil of cinnamon." This satisfied us that arsenic had had a good deal to do in the matter. We removed the teeth, syringed the wound with *glycerine*, and gave Miss S. a wash to use, when she left us. We have reason to hope the mouth will heal, but we anticipate an ugly depression, from the loss of the gum and process.

We regard Dr. J. D. White's preparation of arsenious acid, morphia, and creosote, a very good remedy for destroying the dental pulp; we have used it for many years, and have experienced no injurious effects from it. *Crude* arsenic, in some *savory* oil, is not the way to use the article. Is it not a matter of surprise that any practitioner, now-a-days, should use the dangerous drug in this uncertain, unsafe form?

Prof. White's recipe we would append, as a suitable conclusion to the above:

Arsenious acid, xx grs.
Sulphate Morphine, xxx grs.
Creosote,—sufficient to make a paste.

The arsenious acid and morphia ground into the finest powder, before adding the creosote. A small speck, of the size of a pin's head, if laid on an exposed nerve, and properly secured *in situ*, will generally destroy a pulp in from 12 to 24 hours.

It is now five years since we prepared what we are now using, and we find *age* improves the efficiency of the mixture. The above proportions are given from memory, if they are not correct, will the Editors of the *Register* please state them correctly. We should not ask this, but we are away from home, and have no chance of referring to books.

CLEANLINESS A PRESERVATIVE OF THE TEETH.

(Prepared expressly for popular reading and for reprint in the newspaper press.)

We *wash* our *hands* and *face.* We keep, or should keep our entire body clean, as cleanliness is conducive to health. We are always careful to wash our hands before eating, and are somewhat particular as to the cleanliness of our food. Now while careful in these particulars, which is all very proper, how strange it is that we should neglect the far more important matter—important in a two-fold sense—the cleanliness of the *mouth,* for it has more to do with the food than the hands, and its secretions are necessary to the proper preparation of the food for the stomach. Now a *foul* mouth will necessarily vitiate the secretions, and which being mingled with the food are carried into the stomach, resulting in impaired digestion.

This will surely strike every reader as sufficiently offensive to induce its correction.

But there is another equally important reason for a clean mouth, viz.:—the *Preservation of the teeth.*

By not keeping the teeth cleaned, food—both animal and vegetable—is allowed to remain in the spaces between the teeth which by the warmth of the mouth, becomes putrid, and is supposed to form an acid that acts upon the enamel of the teeth thus producing decay, which is attended with pain, and the subsequent loss of these important organs.

It is necessary the teeth be cleaned at least twice a day—before going to bed and on rising in the morning—and that *each tooth be thoroughly cleaned,* and the surfaces where the brush will not touch may be reached with floss silk waxed with beeswax, and passed back and forth between the teeth. Where the silk can not be obtained, substitute a quill toothpick, made thin enough to pass freely between them and by which all the food or other matter deposited there, shall be entirely removed.

Cleanliness of the mouth, therefore, is conducive to the general health as well as the preservation of the teeth.

PHILADEPHIA, 1860. O. U. C.

COMMENCEMENT OF THE PENNSYLVANIA COLLEGE OF DENTAL SURGERY.

MESSRS. EDITORS :—Annexed I give you a brief report of the commencement exercises of the College here.

The Pennsylvania College of Dental Surgery held their annual commencement on Wednesday evening, February 29, 1860, at the Musical Fund Hall, Philadelphia, and which attracted a large and fashionable audience.

The valedictory was delivered by Prof. T. L. Buckingham and elicited considerable applause.

The Dr. alluding to the high and noble aims of the profession and the paramount importance of those who practice it, to properly appreciate its mission and usefulness, said:

"Let these convictions, then, of the true worth and importance of your profession be added to such as you may have previously stored in your mind. Engage in your calling, with the honest belief that it is not simply an apology for making an honest livelihood, but a calling essential to the comforts and well being of society. And having such views of it, be excited by a laudable ambition to excel in your avocation."

By a reference to a printed statement, I find the class numbered *fifty-one*, and the Graduates *twenty-one*, including *two* from Cuba, *one* from Germany, and the balance of the graduates hailing from twelve different States of the Union—chiefly Southern.

The Demonstrator's report (operative department,) shows that 308 Patients were treated, making a total of 4,055 operations performed during the session in his department alone, in which are 612 gold fillings consuming, as I have been informed, over three hundred dollars worth of gold foil.

In the mechanical department, the Demonstrator reports, "whole number of teeth mounted 1,579," which includes twenty-four whole sets, forty-six upper and four lower sets of teeth.

The large number of operations performed prove conclusively the advantages enjoyed by the class, but at the same time give countenance to the complaint of some few of the city dentists, that the College is interfering with their practice in performing operations, gratuitously, that would otherwise come into their hands; and I must say, judging from appearances, a large number of those offering themselves at the clinic, were able to pay for the services of the dentist, and such, I certainly think, should be sent away, especially when there are such an abundance of those who can not pay; and also in view of the fact that not one in ten who offer, can be attended to.

I am fully aware that it is difficult to discriminate in many cases, and unpleasant to come in contact with the preferences of the Students, yet it is an evil unfair alike to the poorer classes and young practitioners, and as such should be guarded against, and if possible, corrected.

I am sure the gentlemanly demonstrators will receive these remarks in the spirit they are made, and believe, that my only object in noticing the matter is the general good.

The exercises passed off very pleasantly, and to the apparent enjoyment of the numerous auditory.

From a programme of the commencement exercises of the

Baltimore College of Dental Surgery, which was held on Tuesday evening, February 28, 1860, I learn that the number of *Matriculants* were *seventy*, and the *Graduates thirty-nine.* This, I believe, is the largest dental class ever attending that or any other school. Yours,

PHILADELPHIA, March 13th, 1860. O. U. C.

PRESERVATION OF THE TEETH.

Read before the Cincinnati Dental Association, at the regular meeting in February.

BY J. TAFT.

[Published by order of the Publishing Committee.]

That the utmost care and attention should be exercised for the health and well-being of the teeth, is not a question with any one who duly considers the matter. The well-being and health of the entire system is dependent, to a very considerable extent, upon the teeth. Very few seem to realize the value of these organs; particularly is this true in regard to the primary functions of the teeth. Many will express a strong desire that they may retain the teeth as organs of speech; frequently is the remark made, "I am very desirous of retaining my teeth, for they are valuable to me as a speaker." Others, again, appreciate them as ornaments. The remark is often made, "I would not lose my teeth, or have them injured for any consideration, for without teeth, one looks horridly." Now, while it is true the teeth are valuable in both these respects, they are more so in another, viz: mastication. While we would not in any case lessen the appreciation of them as organs of speech and beautifiers, we would have them far more highly prized as masticators.

The eye may become but slightly dimmed, or the ear but slightly dull, and alarm is at once created; the patient immediately betakes himself to those means and agencies which promise the most speedy and efficient relief. If anything is wrong, even in appearance, in either of these organs, it receives immediate attention. With the teeth, however, it is far otherwise; they may be in the most disgusting and unsightly condition, without calling forth the least anxiety on the part of their possessors; they may be invested with a deposition of foreign substances, that render them wholly incompatible with a refined *taste.*

In addition to this, the teeth may be wasting away by disease, which renders them still more unsightly, and yet the possessor exhibits no concern about it; they may even become so much diseased as to be sore and painful, and still, so long as this is not intolerable, they are permitted to pass along.

The means required for retaining the teeth in a healthy condition will be different in different cases. Various circumstances will modify the means that should be employed for their preservation; such as the health of the patient, the strength of vitality, the character of the secretions, the structure of the teeth, and the conditions of the contiguous soft tissues. While there is a system well developed in all its parts, all the different organs acting in harmony, and each one performing properly its functions, and possessing vigorous vitality, they all possess very nearly an equal resistance to injurious agencies, and hence, in a well-balanced economy in all particulars, the teeth would remain unimpaired, quite as long as the organs with which they are associated, as was evidently the design in the beginning. Such, however, is not the case, in the present condition of things. The teeth are often-times ruined, before complete development, and before the other organs have arrived at perfection.

It is proposed here briefly to refer to some of the conditions and causes of impairment of the teeth, and the manner of obviating the injury naturally accruing therefrom.

We propose, in the first place, to refer to those cases in which the teeth are good, and the conditions favorable. It might be supposed that, in such cases, the teeth would not become impaired; such, however, is not the result. Difficulty very frequently occurs with teeth of good structure, and surrounded by favorable systemic conditions. Impairment of such teeth may arise from two or three causes, all of which are extraneous,—none of which, perhaps, is more efficient than *a want of a proper amount of legitimate exercise.* Any organ when diverted from its *appropriate function,* or remains idle, becomes impaired in vitality, and consequently in ability to resist injurious influences; hence, the dentine will be more readily attacked by disease, and the immediate soft tissues more subject to irritation.

The teeth from disease also suffer in another respect; they accumulate, and retain upon their surfaces, foreign matter, that is highly injurious to them. It is a habit very frequently contracted, of masticating all the food upon the teeth of one side; sometimes it is purely a habit, in other cases, the person is forced to it by a diseased tooth; but so far as a result is concerned, it is not material what is the cause. If the teeth are idle, they suffer from impaired vitality, and an accumulation and vitiation of extraneous substances upon them. The food may be of such a character as not to afford the teeth sufficient work to do, which is the case with the soft pultaceous food, so extensively used, which does not produce an adequate amount of friction and pressure upon the teeth. Both friction and pressure is necessary to keep them in a good condition: the former to prevent deposits of foreign substance upon them, the latter to invigorate the periosteal attachment. When a limb is not used, its muscles become shriveled and weak; when a tooth is not used, it loses vitality, the periosteum thickens, and the socket tends to obliteration, and the effort of nature is to discard the useless member.

The value of pressure and friction upon the teeth is exhibited in a very marked degree, by those who use tobacco. Such persons usually possess comparatively good teeth. (There is not in this, however, any apology for the filthy and disgusting habit of chewing tobacco.) This results from strengthened vitality by use quite as much, if not more than from the removal of foreign substance by the friction. The friction certainly is advantageous, particularly when it is of such character and upon such points, as to remove adhering substances; some advantage is also attained, by the free bathing in the abundant flow of saliva, induced by the stimulus of the tobacco; but the great advantage gained by use is strengthening the vitality and attachment of the teeth.

The character of the food has much to do in giving due exercise to the teeth; it should be such as would afford some resistance in mastication. This is requisite, in order to give the teeth due exercise, and to produce adequate friction upon their surfaces.

The deposits upon the teeth differ very much in character and substance. There is the thick, gummy mucus, mixed up with food and foreign substances lodged upon the teeth, and passing through the various stages of putrefaction, affecting injuriously both the teeth and gums, where it may be in contact with the latter.

Deposits of this character are more pernicious than those of greater density; as they increase in density, and receive a larger proportion of calcareous ingredients, the liability to injury of the tooth tissue is correspondingly diminished; consequently, those deposits consisting almost solely of calcareous matter do not produce decomposition, or disease of the bone of the teeth.

The utmost care should be used for the removal of the deposits first referred to; this is very easily accomplished by the attention and well directed efforts of the patient. It can be done in most cases by the use of an appropriate tooth brush, but in other cases, a suitable dentifrice will be required. Such preparations should possess the following properties, viz: mechanical action sufficient to remove all deposits, alkalinity to neutralize acidity, and a de-odorizing property.

Ordinarily in a state of good health, the secretions normal, the proper kinds of food employed, the teeth would remain comparatively free from deposit of injurious substances, but so rarely do these conditions all exist in any given case, that the general rule is, that special care and attention is required to keep the teeth in a proper condition. It is true that the general health may to all appearance be good, and the teeth of good construction, and yet substances accumulate upon them, that will be highly injurious; this is particularly liable to occur, when a particular change takes place in the quality or relative quantity of the secretions of the mouth. An increased relative amount of mucus facilitates deposits upon the teeth; a vascid condition of the saliva is also productive of the same results. When such a condition exists, the utmost care is required, to secure cleanliness. The method of accomplishing this is in some sort familiar to all. When the secretions of the mouth have become changed, as just referred to, the preservation of the teeth calls for a restoration to their normal condition.

In order to accomplish this, a knowledge of physiology and pathology is required, for nothing short of this will enable us to accomplish the object with any certainty.

The causes of disease of the teeth are either general or local, or both; for the former, it is the business of the physician or scientific dentist to treat. The treatment of the latter is more the special business of the dentist, but the knowledge of the dentist should always be competent to detect these causes, wherever they may exist.

The preservation of the teeth, when they are influenced by general ill health, is exceedingly difficult. The particular treatment, especially the general treatment, would be modified and controlled by the condition. In all such cases, however, the utmost regard should be observed with reference to the treatment and removal of all local causes, for under such circumstances, local causes will produce greater injury.

In the preservation of the teeth, attention should be given to every thing that would in any way injuriously affect them. Sudden and extreme variations of temperature are injurious, or possess that tendency, but not to the *same* extent in all cases; some will resist such influences far more than others. The soft, highly organized teeth will be far more affected than the dense and less highly organized. While great care should be exercised by *all* persons in respect to changes of temperature, those having teeth highly susceptible to such influence, should be exceedingly cautious how they subject them to extremes of temperature.

Many things in which people so freely indulge, are very pernicious in this respect, such as hot coffee, tea, etc. These are used by many persons almost at boiling temperature ; this is attained by degrees ; to such an extent is this carried, that an uninitiated mouth would be scalded.

The teeth, as well as the mucous membrane, may accommodate themselves to *some extent* to this excess of temperature, but never can they endure it with impunity.

A very safe criterion in regard to the effect of changes of temperature upon the teeth, is found in those teeth that have not become accustomed to any unnatural condition. With such teeth excessive change of temperature, either by cold or heat, is attended with pain corresponding to the extent of the change.

Very cold fluids, as ice water, produce great pain in the teeth ; habit will do much to enable the teeth to bear these transitions.

The greatest mischief is accomplished by the alternate use of hot and cold substances in immediate succession ; the most intense pain may be produced in all the teeth in this way. It is not improbable but that necrosis is thus sometimes produced. But certainly in this way, the vitality of the teeth is much impaired.

Teeth in which there is a large relative amount of earthy elements, and consequently very friable, are lable to have the enamel checked by excessive changes of temperature, so much so as to facilitate the breaking away of portions of enamel ; fractures facilitate caries.

In coffee, tea, soups, hot bread, *ice* water, soda water, etc., we find those things which are the vehicles of the greatest changes of temperature.

No other organs of the human system would endure abuse so great as this ; the eye, the ear, or any such organ, would be destroyed by far less powerful influences than many that are constantly operating upon the teeth. The teeth are organized with a view of withstanding and resisting injurious agencies ; yet they can not endure all things. The teeth often suffer injury by being used for cracking or breaking hard substances, such as nuts and things of a similar character; lifting heavy weights, or drawing bodies of great resistance, gnashing the teeth, etc. I have attempted to enumerate some of the methods by which the teeth are injured; of course, for the preservation of the teeth; the indications are to refrain from practices leading to them, and in all cases, to promptly meet and counteract the unfavorable conditions.

MODES OF PRACTICE AND THEIR VICISSITUDES.

BY J. TAFT.

In taking a retrospect of dental practice for the last ten or fifteen years, there are many particulars, both in the mechanical and operative departments, to which it may be interesting, if not instructive, to advert occasionally, to modes of practice that have been introduced, and the ordeals to which they have been subjected. We will be content for the present, to consider a little some of the methods and styles of work in the department of artificial dentures, or rather, in the mechanical department. The first method introduced for obtaining artificial dentures was by carving from ivory or bone, or the teeth of some animal, the substitutes, or using the human teeth. These were usually carved, or formed to fit the parts as nearly as the eye would direct. They were sometimes inserted upon metal, in other cases, without metal; if a partial set, with clasps or ligatures; if an entire set, by springs, never by atmospheric pressure. This method of procuring artificial teeth is wholly abandoned, because it is superseded by others much superior.

The next step in the advancement was the production of porcelain teeth, and these were mounted upon gold or silver plate. In the introduction of metallic plates, they were adapted to the parts as nearly as possible with the pliers and hammers, without models. We are not advised as to the time when forming models from impressions taken from the parts, was introduced; it was probably thirty years ago. This process revolutionized the adaptation of plates to the gums. In the production of these, many improvements have been made from time to time; they were first made of brass, copper, and sometimes of iron, but these were found impracticable, not only from the difficulty of procuring them, but also because of the great contraction to which these metals were subject, and other metals have been introduced, that have sufficient hardness, and will contract but little or none at all, that will run sufficiently sharp to give a perfect model of the part represented. This process will doubtless be retained as long as bases are made for artificial teeth of wrought metal.

The method of mounting teeth upon gold or silver plates was far more successful in the production of artificial dentures than any thing that had preceded it. Fifteen or twenty years ago, teeth well mounted upon gold or silver plate, was supposed to be the ultimatum of mechanical dentistry; long since that, and some even to the present time, seem to rest quite satisfied with only this attainment in the production of artificial denture; but the improvements that have been made in the last ten years have taken away much of the prestige of this style of work.

Continuous Gum Work was introduced to the profession about ten years ago, and though very crude and imperfect at first, it has been improved step by step, till it is now conceded to be in many particulars superior to every thing else. It at the out-start promised much, and owing to this fact, many were induced to take hold of it, and many of these having no ability to use it, even had it been in a greater state of perfection. Efficiency in the early part of its history, even in the hands of those most skillful in its use, was the exception, and not the rule. The consequence was, that a large proportion of those who first took hold of it, sooner or later abandoned it, either to hold forever in remembrance their sad disappointment, wtithout it, or to resume it when more nearly perfected, and under more encouraging auspices. This style of work has run a severe course from the beginning; it involves a process and manipulation requiring great skill, tact, and rather an extensive knowledge, in certain directions. This fact, the greater proportion did not recognize, for a time at least. Under such circumstances as these it was, that this style of work received such fearful denunciations. The successful production of this work involves some principles of science, not very generally attained by the dental profession. The precise influence of heat upon metals and upon silicious bodies is not yet very perfectly comprehended, even by those farthest initiated, but carefully conducted experiments are leading in the proper direction.

He who sets at defiance principles well established, either by experiment or otherwise, should not complain if he meets with unfortunate results. It would be tedious to designate all the mistakes that have been made in the construction of this work; suffice it to say, that from the beginning to the end, there is scarcely a step where errors have not been made—in working the platinum, annealing it, swaging it, attaching the teeth, in the preparation of body and gum, in baking it, in the management of the furnace, etc.—all these require definite and accurate manipulation, based upon correct principles. The value and efficiency of this work is no longer problematical. There are, however, without doubt, improvements to be made upon it; perfection we have not anywhere. Continuous gum work has run a severe gauntlet, but is coming out a success.

CHEOPLASTIC, OR CAST WORK.—This style of work was presented to the profession between three and four years ago. With the method of its presentation all are familiar. Many advantages were claimed for the work, the chief of which is the perfection of adaptation; the base being cast into the plaster model, and running sharply, and at a low temperature, and contracting but little or none in cooling, the adaptation is necessarily very accurate. The metal may be worn in almost all mouths without any very objectionable change.

The entire obliteration of all interstices by this mode is a very desirable feature. Any desired form, prominence or thickness can be given to this work. This style of work was adopted at first by a large number in the profession, quite a number of whom have abandoned it. Some there were whose expectations were almost wholly disappointed, because they expected too much, anticipating that it would supplant and take the place of every other style of work, and that the work would be accomplished with far less labor than by any other mode.

Some persons in the dental profession, as everywhere else, eagerly grasp at, and become enthusiastic over anything and everything that is new, regardless of its real merits. Others again, with eagerness take hold of anything that promises profit; others there are—lazy souls—who readily adopt any mode of practice that can be easily and quickly accomplished. Again, there are some who examine carefully, in the light of science, the real merit of any mode of practice, and then testing it by careful experiment, determine accurately the true value of the process, and then adopt or reject, according to this umpire. Cast work of pure tin was introduced to the notice of the profession some ten or twelve years ago, but was not very extensively used, owing probably to its contraction upon cooling, and a want of sharpness in casting. Cheoplastic method may be employed in the construction of appliances for the correction of irregularity. It is in this particular valuable. This style of mounting teeth, like all others, has some objections, the chief of which are its weight and the character of the metal; and this is generally most objectionable to those who know least about it. It can not with impunity be worn in the mouth with gold or platinum plates.

VULCANITE WORK.—This style of work was introduced to the profession about five years ago. It has gradually been gaining favor with the profession from the beginning. The method of its introduction was not such as would make the best impression. It, like other things, has its merits and demerits. Like every thing else, at first more was claimed for it than could be accomplished, and especially was this true in regard to its introduction; at one time it was claimed that three or four hours was quite time enough to make a full set of teeth by this process; while in reality quite as much time and labor, skill and care are necessary to obtain good results as in any other style of work. This work has the advantage of a very perfect adaptation, if all the steps are properly performed. There is in this also no interstices or points of lodgment for food or foreign substances. It is lighter than any other style of work, is more congenial in the mouth, there is not that unpleasant sensation, upon the occlusion of the teeth, experienced with metal or mineral plates. The color is as yet objectionable. The character of the material is most objectionable to those who know least about it. It may be worn in the mouth with any other kind of plates. With regard to the adoption of this style of work, there are the same peculiarities observable in the profession as have already been referred to. Some test every new method for themselves. Some wait for others to make all the experiments, and determine whether a process has real merit. The remark is often made, "I got bit once with a new thing, and I'm going to be a little cautious how I take hold in future." This is a sad acknowledgment; it is a tacit admission that the person who speaks thus, has no method of determining the merit or character of any mode or process, except by experiment. Now, while principle and theory without experiment, will not accomplish what the scientific man desires, yet simple experiment, unaccompanied by any knowledge of principles or theory, is an exceedingly feeble and uncertain guide. Every one should test every new process, at least, that promises any thing, for himself, both by experiment, and by attaining a thorough knowledge of all the principles involved, without which the man of real art and science will not rest content.

IS THERE CIRCULATION IN THE DENTINE?

BY E. COLLINS.

ASIDE from what we have learned occularly, by the aid of the microscope, respecting a dental circulation, we have other and more infallible criteria by which we are enabled to arrive at that point of definiteness which will justify us in coming to the settled conclusion that the dentine is, in common with other tissues of the human body, endowed with veins and arteries, and that this dense ivory structure is consequently subject to similar changes observable in other tissues.

The criteria, then, to which I desire to call attention, and which I believe fully and satisfactorily to answer this question, are the following:

The dentine, in order to the existence of the vital anatomical relation which it sustains to the rest of the body, must possess, in accordance with the laws of the animal economy, life in itself.

This all are ready to admit, and in so doing, must admit all, or at least the plausibility of what I am about to attempt to prove.

What is life? I answer, it is the same coöperating agencies that gives and sustains animal life. But what, you inquire, are these agencies? I answer, sensation, motion and nutrition. These are dependent for their existence one upon the other, in the living animal tissue, and hence, if there be dentinal nerves—a fact which has been established beyond doubt, there must be necessarily accompanying arteries and veins. For it is not to be reasonably presumed that the nerves of the osseous tissues possess any distinctive characteristics from the nerves of the soft tissues, hence, they must be subject to similar wear and waste of their compound elements, which would soon result in their extinction, was it not that these elements are being constantly supplied, as disintegration takes place, through the medium of a dentinal circulation, the only medium known to us, through which the various elements entering into the formation of the human body are conveyed to their respective destinations. And thus it is that other of the animal elements of dentine exist, and in accordance with first physical laws, is constantly undergoing changes, which take place more or less rapidly, according to the age, temperament and general health of the individual.

Lastly, the fact that the dentine, as age advances, becomes more and more dense, and less sensitive, in consequence of the gradual increase of the earthy and the proportionate decrease of the animal elements, is one with which every careful observer is familiar, and which of itself affords us sufficient proof of the existence of a dentinal circulation.

PREPARATION AND FILLING OF A SIMPLE CAVITY IN THE RIGHT SUPERIOR CUSPID, POSTERIOR PROXIMAL SURFACE.

BY DR. J. H. PAINE, FRANKLIN, O.

[Read at a meeting of the Mad River Valley Association.]

The great importance of preserving the human teeth is not questioned, we presume, by any one; and as the *cuspidati* occupy a more prominent position in the jaws than any others of the set, the preservation of them becomes matter of the utmost importance. We find them most frequently decayed on the posterior proximal surface, owing, no doubt, to the form of the tooth itself; the posterior proximal surface being more favorable for the retention of substances that cause or superinduce caries.

Our patient is requested to take the chair, and upon close examination with mouth glass and excavators of untempered fine points, we find, among others, that the right superior cuspid is decayed upon its posterior proximal surface. We will try to give our plan of filling such a cavity. The first thing to be done is to make space sufficient for the proper excavations, preparations, and plugging of same. The writer is aware of the timidity that frequently deters young operators from making that necessary space in order to the proper introduction and consolidation of a good filling. But let us no longer be afraid to do right. Let us have space, and a plenty of it, so that we have room to rotate the shanks of our excavators, pluggers and burnishers. The space should be made with cutting instruments. The cutting should be confined to the cuspid alone, unless the anterior proximal surface of first right superior bicuspid is decayed; in which case, a file, cut upon both its sides, may be used. But if the decay is confined alone to the cuspid, a safe-sided file should be used, the plain or safe side being carefully kept towards the bicuspid, not in the least wise scratching or cutting its healthy surface. The space should be greater at the palatial border of the cavity than at its labial. The file should occasionally be wet in tepid water, to prevent its becoming choked by the cuttings from the tooth.

When space enough is acquired, and the new surface well polished with files and Scotch stone, we proceed to the removal of caries from the cavity. This, we think, is best done with the ax and hoe-shaped excavators, having several of such at hand, with the blades of different lengths and breadths, its removal is soon effected.

We now proceed to the preparation of the cavity for the proper retention of the filling; for it is seldom that the removal of the decay is all that is necessary to be done in order to fill a cavity properly. First, then, retaining points must be made. These may be formed most easily with the ax-shaped excavators. There should be a dozen or more differently sized blades at hand, some long, with narrow cutting points, and some of different lengths, with different breadths of blades, and of course they should be sharp, and of good unyielding temper. A stroke is not always the best motion to cut properly within the cavity with the dentist's ax, though it may be with the woodman's. A semi-rotary movement, given with a keen blade, cuts quickly and more correctly the part desired to be taken away than any other movement that we know of at present. The shovel-shaped excavator is also needed in cutting from the hand, in the direction of the root of the tooth. This should be square on its edge, the blade set at an angle of about 45° with the shaft. The hoe-shaped excavator is needed, sometimes, in cutting towards the hand of the operator, or apex of the tooth. *The cavity must be retentive ;*—at least as large as its orifice, and we prefer it a little larger.

It now having the right form, we proceed to fill it with gold. We prefer "adhesive" gold foil, of any reliable brand. We use strips, preparing them by folding a sheet into about four thicknesses, and cutting them with foil scissors in widths of about two lines. The cavity is now to be wiped out thoroughly by bits of cotton, and a clean napkin placed immediately behind the cavity to be filled, and retained at its place by the forefinger and thumb of the left hand of the operator, to prevent the breath of the patient or saliva from the buccal gland insinuating itself into the cavity, preventing the successful condensation and solidification of the plug. We have our pluggers and strips at hand, and proceed at once to inserting the filling. The plugger must have sharp points. We attach the end of one of the strips to the points of our plugger, and convey it at once to a retaining point, or pit, and fasten it there by compression, and continue adding by links or folds, compressing thoroughly the part carried to the bottom of the cavity, leaving the outer end of link uncompressed for the present. We continue laying link upon link, until the cavity is full—*solidly full ;* then, beginning again at the margin of the filling, we condense with the same instrument, the outer ends of the links that stand upon the border, and approaching the center. If not enough of gold has been introduced to make it solid and full, we take an ax, of quite a long blade, and cut a deep gash in the center of the plug, and insert gold into it until it is full and solid. Then with a larger faced condenser, of four or more points, we go over the filling as before, beginning at the margin. When indentations can no longer be made by compression, we proceed to file away the excess of gold. This is best done by files of fine cut, wetting the file occasionally in tepid water and passing quickly and lightly over the whole surface of the filling, until it is perfectly level with the walls of the cavity.

Many have failed at this point, who did all the work of putting in a filling well, because they were remiss here. It will not do to leave the plug projecting beyond the walls of an approximal cavity; the act of mastication brings substances in contact with the filling, exerting a lateral pressure that, sooner or later, displaces the filling. The plug being now dressed even with the wall of the cavity, we proceed to polish it and the surface of the plugged tooth, with slips of Scotch stone, dipped occasionally in water. When perfectly smooth, burnishers are lightly and quickly passed over the whole surface, until in our judgment, it is perfectly smooth. The plug is now completed.

There may be a little tenderness for several days, when cold or hot substances come in contact with the new surface; but as soon as the new surface within the tooth is re-ossified, it will have passed away.

POPULAR INSTRUCTION.

Messrs. Editors:—In the Register of November last, appeared an article on the subject of popular instruction in dentistry, deploring the prevailing ignorance among the masses, and suggesting the publication in the newspaper press, of short but plain and attractive essays on the importance of preserving the teeth,—their use in the animal economy, with some general directions as to their preservation, etc.; and in the preparation of which I was careful to enjoin entire freedom from technicalities and "*everything of an advertising* *character.*" It will be clearly seen, by any one who will turn to the article in question, that there was no endorsement given to "professional advertising" as practiced at this day.

As some indication, though imperfect, of my object and purpose in this matter, I must ask the reader to turn to the January issue of the Register, page 320.

My motive for rehearsing this story is to answer your correspondent, C. C. Dills, who, in an article entitled "professional advertising," and published in your January issue, takes, what I conceive to be, an unwarrantable liberty with the suggestions I have made, in endeavoring, apparently, to make me sustain indiscriminate professional advertising.

Mr. Dills expresses himself as "pleased to note the movement for 'popular instruction'—bearing with it the true principle of dental advertising—that of informing the uninformed of the *importance and capabilities of dentistry.*"

The words which I have italicised express something very different, and a purpose entirely dissimilar from anything I have proposed. My object (and which I think I made plain) was to "inform the uninformed" of the nature and usefulness of their teeth, and the importance of their preservation, with some hints as to the prevention of their decay and loss, while *he* proposes to inform them of "the importance and capabilities of dentistry."

Prominent physicians in our large cities have, on the approach and during the prevalence of an epidemic, brought to the notice of the people, by circular and through the public press, a series of suggestions or hints as to the proper course of conduct or living best calculated to secure exemption from the disease, and designed as a preventive measure solely. Now, the mass of our people require something of the same sort in regard to the decay of their teeth, for the epidemic is raging to an alarming extent, and they should be informed how best to prevent its approach or combat its attack; but this can not be accomplished by informing them of the relative cost of gold and tin fillings, or of the very many methods of supplying the loss of the natural teeth, with prices attached, or of the immense facilities and astounding capacities of the advertiser, which is the customary form of advertising now prevalent, and which I utterly and indignantly repudiate. My object is PREVENTION; Mr. Dills', I fear, is PRACTICE.

In the sincere hope that I have clearly and satisfactorily explained my position, and what I conceive to be the difference between "popular *instruction*" and "professional *advertising*," I now close, with the single remark that my only purpose in this paper is to keep awake attention to the importance of popular instruction, and but for which, Mr. Dills would have remained unanswered till the "crack of doom," so far as I am concerned. Yours,

PHILADELPHIA, Feb., 1860. O. U. C.

Proceedings of Societies.

PROCEEDINGS AND DISCUSSIONS OF THE CINCINNATI DENTAL ASSOCIATION.

THE regular monthly meeting of this association was held at the office of Drs. Wardel & Doughty, March 18th, 1860. President Wardle in the chair.

Minutes of the last meeting were read and approved.

The name of Dr. J. A. Watling was presented for membership. Upon balloting, he was found unanimously elected to membership.

This being the regular evening for the election of officers, proceeded to the election, which resulted as follows:

Dr. J. TAFT, *President.*

Dr. H. A. SMITH, *Recording Secretary.*

Dr. J. RICHARDSON, *Corresponding Secretary.*

Dr. WARDLE, *Treasurer.*

Drs. RICHARDSON, H. A. SMITH, J. G. CAMERON, *Publication Com.*

Reports were called for, but the committees not being prepared to report, proceeded to other business.

DISCUSSIONS.

The subject: *Hemorrhage after the extraction of teeth. Its conditions, causes and remedy.*

Dr. FOOTE opened the discussions, by saying that the proximate cause is an irruption of blood vessels. The remote cause is a strumous or ill condition of the system, which does not possess sufficient recuperative power.

The remedy most generally effective, is the application of pressure, but this will not always effect the desired purpose; he found very minute doses of quinine to be useful, dissolved in water and taken internally.

Dr. RICHARDSON has only met with two or three difficult cases, one probably caused by an interruption of the menstrual flow, the other by a fractured and lacerated condition of the tissues, thus preventing a contraction of the parts. He referred to perchloride of iron, as being a good hemostatic. It may be introduced with a plug of cotton or linen. Failing in this, by this method, he would take an impression of the parts, and form a plate, and use it as an instrument of compression, using it in connection with pledgets and roll. In cases of predisposition to hemorrhage, it might be necessary to resort to some constitutional treatment, perhaps give some astringents internally. Persons of plethoric habit might require purgatives.

Dr. DAVENPORT had experienced some difficulty with one case, where an upper wisdom tooth had been extracted, but succeeded in arresting the flow chiefly by compression.

Dr. WARDLE had met with three difficult cases, but was successful in arresting the hemorrhage by local treatment; used the perchloride of iron.

Dr. SMITH gave an analysis of the blood. In the blood we have several component principles, prominent among which are albumen and fibrine. He explained the progress of coagulation; it does not occur so readily after prolonged bleeding. Iron enters largely into the blood. Clot acquires firmness in proportion to the amount of fibrine it contains; no coagulation takes place in persons killed by lightning. Blood last drawn coagulates more rapidly, but not so firmly, as that first drawn. Fibrine is below the standard during pregnancy, especially from the first to the fourth month. A decrease of fibrine increases the tendency to hemorrhage. A hemorrhagic predisposition may be traced to the state of the blood; it may be active or passive.

Treatment.—Cold water is effectual, inasmuch as it produces contraction of the capillaries. Most styptics are astringents, but some astringents are not styptics. Nitrate of silver is a powerful astringent.

Dr. TAFT remarked that hemorrhage depends upon one or more of several conditions. In a hemorrhagic diathesis, there is a want of tone, or contractile power in the coats of the vessels, and hence in a rupture or laceration, there is no contraction of the wounded vessel, owing to inability. The blood is often-times changed to such an extent, that it does not coagulate regularly or firmly on exposure to the atmosphere. Either of these conditions will be operative in the production of hemorrhage from any ruptured vessels. Hemorrhage sometimes occurs where there is no obvious hemorrhagic diathesis, in consequence of the rupture of some considerable vessel. The coats of a vessel are sometimes so firmly attached to the walls of a bony canal through which it passes, that it is impossible for it to contract as in soft parts. When an arrangement of this kind exists in connection with a vitiated condition of the blood, it constitutes a difficult case. There are many conditions that will modify the tendency to hemorrhage, such as various diseased conditions, residence in malarious districts, or where there is anything that will vitiate the vitality and disease the blood. He remarked that the greatest number of cases of hemorrhage with which he has had to contend were from malarious regions; did not remember that he had ever witnessed a case of obstinate hemorrhage from the high and healthy parts of the country. This is a particular that should not be lost sight of, by those who practice in portions of the country where miasma exists. The treatment of hemorrhage is either general or local, or both, as the indications may direct. Constitutional treatment should be such as would give tonicity and contractile power to the vascular system, and improve the blood so as to facilitate its coagulability. The local treatment consists in the application of astringents, styptics and the compress, the application of which is pretty well understood.

Dr. FOOTE would not expect hemorrhage from extraction of a tooth, unless there was a scorbutic or flabby condition of the system, or some mechanical arrangement that would facilitate the hemorrhage. Spoke of the condition of the blood of those having what is called Green Sickness. It is a want of iron in the blood. He also suggested the use of electricity in cases of hemorrhage, giving some directions how to apply it.

Did not favor the use of acetate of lead, but preferred the preparations of iron—persulphate, perchloride of iron, etc.

Dr. RICHARDSON mentioned nitric acid as a valuable agent in many cases. He referred to the various modes of treatment at some length.

Some remarks were made by some of the members in regard to the use of the mallet in filling teeth. They were, however, characterized by a spirit of inquiry.

Adjourned to meet on the second Tuesday of April, at the office of Drs. Taft & Foote. R. H.

* * *

MAD RIVER VALLEY DENTAL ASSOCIATION.

THIS Association held its fourth quarterly meeting at the office of Dr. B. A. Rose, in Urbana, on Thursday, April 5th.

The meeting was called to order at 2 o'clock, by the President, Dr. G. WATT.

The minutes of the last meeting were read by the Secretary, Dr. G. L. PAINE, and approved.

The following Dentists were elected members of the Association, viz: Drs. W. A. Pease and C. Bradley, of Dayton; Drs. D. W. Harris and N. W. Williams, of West Liberty.

The members of the Association entered into a discussion of Mechanical Dentistry, including the taking of casts and swedging of plates. Each member present gave his own experience in his practice in these operations, and the exchange of opinions on the *modus operandi* of each was interesting and valuable to the profession. After a full discussion on this subject, the meeting adjourned to meet at 7 o'clock.

In the evening Dr. Clippinger read a very entertaining essay upon "Taking casts of the mouth in plaster Paris." The essay was ordered to be published in the *Dental Register of the West.*

The subject for discussion in the evening was "Filling Teeth." Much interest was elicited on this subject, and a prolonged discussion was had by the members. Much information of value was received through the experience of each member.

The following gentlemen were elected delegates to the National Society, which meets in July, at Washington, D. C., viz: W. A. Pease, A. A. Blount, and G. L. Paine.

The following gentlemen were appointed to read Essays upon subjects relating to Dentistry, at the next regular meeting:

Dr. A. A. Blount, of Springfield; Drs. E. M. Lee, J. G. Palmer, and B. A. Rose, of Urbana.

At half-past nine o'clock the Association adjourned to meet at the office of Dr. W. A. Pease, in Dayton, July 3d, 1860.

After the adjournment, the Dentists consumed some time in conversation upon Mechanical and Operative Dentistry.

The following is a list of members present:

A. A. Blount, Springfield; W. A. Pease, C. Bradley, Dayton; G. Watt, G. L. Paine, Xenia; D. W. Harris, E. W. Williams, West Liberty; S. Clippinger, Bellefontaine; J. H. Paine, Germantown; E. M. Lee, J. G. Palmer, B. A. Rose, Urbana.

Selections.

SANITARY SCIENCE.—What Sanitary Science has done, and has yet to do, may be gathered from the following facts: The science is quite of modern date; but since the application of its simplest principles, the cleansing of streams, drainage of houses, and introduction of pure water, the following evidence of benefits resulting has been given us: In Liverpool the mortality had fallen from 37 in the 1000 to 27; in Bradford from 28½ to 22; in Gloucester, from 27 to 24. Taking an average of nineteen towns which had been treated in this way, it was found that the death-rate dropped from 28 in the 1000 to 21. Corydon was taken in hand scientifically some time ago; and since then an average of 196 lives have been saved in the town every year! The mortality among the pauper infants and pauper children in the metropolitan unions has been enormously reduced. In the Military School at Chelsea a death-rate of nine in the thousand has been brought down to one of four. The female prisoners at Brixton, who live under sanitary rules, are three times as healthy as the poor needle-women of London; and at Pentonville, notwithstanding the allowance to be made for moral depression, the death rate is only one-third of that prevailing in populous towns. But still there is a great work to be done; for as we are told, authoritatively, that at least 100,000 persons die annually in these islands at premature periods and by preventible deaths; and at least 1,000,000 more are wasted and debilitated from similar causes. Talk of war, indeed! why, what battle or contests ever wrought havoc like this; havoc, be it remembered, not occurring at intervals, like an exceptioned calamity, but carried steadily and incessantly through the ranks of our population? And we have still to remember the lesson taught us by the Crimean war. In that war we lost altogether 20,800 men; but of this number 5,000 only were slain by the enemy. All the rest, 15,800 soldiers, fell victims to privation and disease.—*Medical Times and Gazette.*

◆

DR. EVANS, the eminent American dentist residing in Paris, is thus spoken of by the Paris correspondent of the *Evening Post:*

"There are not many of our readers who have not heard of Dr. Evans, the American dentist, as he is called, *par excellence*, and who has charge of the teeth of pretty much all the sovereigns of Europe, and of America too, I suppose, when the latter come to Paris. He made a flying professional visit the other day to Nice, at the instance of the former Empress of Russia. On parting, she presented him with a diamond ring, valued at 60,000 francs, about $12,000. The Doctor and Mrs. Evans have received presents enough from crowned heads, in the shape of bracelets, watches, snuff-boxes, rings, and curious articles in gold and precious stones, to make him a millionaire, if he had their cost in money. There is, as I have already said, scarcely a sovereign on the continent of Europe from whom he has not some costly testimonial."

◆

PROPORTION OF THE SEXES IN PROVIDENCE.—Dr. Snow, City Registrar of Providence, R. I., says: Of the 1,593 children born in Providence in 1859, there were 825 males and 768 females. This gives 107 males to every 100 females, or 51.8 males and 48.2 females in each 100 children born. These are almost exactly the average proportions in this city during six years past.

But there is a most remarkable difference in this respect between the American and foreign children, the explanation of which is not so obvious. Of the children of American parents, born in 1859, there were 102 males to 100 females, while of the children of foreign parents there were 111 males to 100 females. Can those who are interested in the subject give any explanation of this remarkable difference?—*Medical and Surgical Reporter.*

Administration of Anæsthetics during Sleep.—To avoid excitement and alarm in children, it may be very desirable to produce anæsthesia during sleep. To accomplish this without waking a sleeping patient, a very gradual and cautious administration is necessary. Dr. J. H. Beech states, in the *Peninsular and Independent Medical Journal*, that he has thus succeeded several times. One of these cases was the extraction of a grain of corn from the nostril of a restive child, aged three years. Some ineffectual efforts had been previously made to remove it. A sponge moistened with chloroform was held near to the mouth, being careful not to touch the face. After the removal of the foreign body, the child, without being awakened, was allowed to continue its usual sleep until morning, when he awoke at the usual hour, unconscious of anything unusual having occurred.

* * *

Diseased Tusk of an Elephant.—Dr. J. C. White showed a section made near the base of a tusk of a large elephant, illustrating the effect of the passage of a rifle ball through the dentinal pulp, from side to side. The ball, which was a large one of wrought iron, probably entered the thin socket formed by the prolongation of the premaxillary bone in which the tooth was inserted, breaking through the tender pulpy cone, and the tooth wall of the other side, and spent its last force against the interior surface of the socket on the opposite side. It then fell back within the rollow it had formed, and became imbedded within the new growth it excited, which consisted of large, irregular-shaped layers and masses of osteo-dentine, a tissue which was secreted instead of ivory, probably in consequence of the irritation produced by the foreign body.—*Boston Medical aud Surgical Journal.*

* * *

Sulphate of Copper with Opium in Diarrhea from Teething.—Among other therapeutical news, we notice, in a recent number of *Schmidt's Jahrbücher*, the following formula, which Prof. Eisenmann, of Würzburg, has found very efficient in diarrhea of children from teething, viz.: Cupri sulphat. ¼ gr.; pulv. opii. ¾ gr.; pulv. sacch. q. s. Three times daily one such powder.

AN EASILY APPLIED TREATMENT OF SHORT-SIGHTEDNESS. —When FOLTZ, Professor of Physiology at Lyons, first published his article on the mechanical treatment of myopy in the *Gazette Medicale*, a year ago, we doubted the efficiency of his method, and did not deem it entitled to a place in the *Reporter's Periscope*. While we make it truly a " view around," over the whole medical world, it is our constant endeavor to make our Periscope reliable, as well as comprehensive, and drawing from the medical journals of every country, we are especially careful to exclude those reports of extraordinary and " miraculous " cases, cures and inventions, those " hoaxes " which to our regret, we have afterward seen going the round of our own journals as " foreign *intelligence* " (!?) But while thus carefully selecting from the vast garners which the foreign journals present to us, we never lose sight of anything that might really prove of benefit to our profession; and though withholding the empty stalks, we as *Reporter* simply, leave to our readers the final trial and judgment of the value of the grain.

The following method we can now publish, however, with the recommendation resulting from entire or partial success in three or four cases, that have come under our observation.

Short-sighted persons, in looking at distant objects, usually blink, i. e. bring the upper and under eyelids nearer together, covering a part of the cornea. A finger is applied to the outer commissure of the lids in this position, and they are drawn outward a little. By this procedure the cornea is flattened, and the axis of the eye shortened. In consequence, the object looked at will appear surprisingly distinct in its outlines, often as much so, as if seen through suitable concave glasses. The pressure thus exerted through the lids on the eye must only be slight; when too great, the eye becomes presbyoptic, and vision dulled. Practice soon insures the exercise of the proper degree of pressure.

This simple, not painful, and entirely harmless proceeding is to the short-sighted of the same service as the use of the monocle or single eye-glass. It enables him to see distant objects sharply defined, to read signs, names of streets, numbers of houses, to recognize actors on the stage, or persons in a large hall, etc. The vast advantage of this " easy method" over concave glasses consists (besides its being always at hand), in its having not only palliative, but also curative effects. It has certainly lessened short-sightedness in our own case. The cornea partially regains through the slight but oft-repeated pressure on it, the natural retractility, lost through strong pressure from within ; its convexity no longer increases, but rather diminishes, as also the antero-posterior axis of the eye. It is not to be overlooked, how very easy of execution this gymnastic eye-exercise is. It subjects the individual to so little inconvenience and interruption of occupation, that it is soon performed from habit, and almost unconsciously.—*Medical and Surgical Reporter.*

SUBJECTS FOR DISCUSSION,

By the Western Dental Society, at its next meeting, to be held in Springfield, Ill., on the fifth day of July, 1860.

First. What are the effects upon the permanent teeth, of ulceration about the roots of the deciduous teeth?

Second. Causes of caries of the teeth, remote and immediate.

Third. What are the indications to be met in, and the end to be attained by the filling of a root? What is the best method of performing the operation? What is the physiological or pathological condition of a filled root? and what is the average of success in this branch of practice?

Fourth. Method of extracting the several classes of teeth and roots.

Fifth. Etiquette, embracing fraternal intercourse, (beginning with, who is my brother?) Treatment of neighboring practitioners. Demeanor to patrons. Courtesy to physicians. Courtesy to clergymen, etc., etc.

Sixth. Mechanical Dentistry—Gold plates, continuous gum, hard rubber, etc., etc. What is their comparative value for dental uses, and what should decide our choice between them in any given case?

A. W. French,
E. A. Bogue. } *Committee.*
C. A. Fitch,

AMERICAN DENTAL CONVENTION.

The Executive Committee report the following *Order of Business* for the meeting to be held at Saratoga, on Tuesday the 7th of August, 1860.

1st. Reading Minutes of last meeting.
2nd. Reports of Officers and Committees.
3rd. Admission of Members.
4th. Election of Officers.
5th. Retiring President's address.
6th. Induction of Officers elect.
7th. Miscellaneous Business.
8th. Essays and Discussions.

All Essays shall be read to open the discussions on the subjects to which they relate and they shall be limited to 20 minutes in length.

I. ARTIFICIAL DENTURES.
  Preparing the Mouth.
  Materials for and modes of obtaining impressions and models.
  Various Basis and their Manipulations.
    Metals.
    Minerals.
    Gums.

II. STRUCTURE AND NUTRITION OF THE TEETH.

III. IRREGULARITIES. *Causes.*
  Treatment.—Prophylactic.
    and Remedial.

IV. SENSITIVE DENTINE. *Pathology.*
  Cause,
  Treatment.

V. EXPOSED OR WOUNDED PULP.
  Prognosis.
  Treatment,—Preservative,
    and when devitalized.

VI. DISEASED DENTINE.
  Pathology.
  Causes,—Remote and proximal, including the effect of different diseases and medicaments upon the teeth.

Treatment,—Prophylactic, *general and local.*
Remedial, *general and local* including materials for and modes of filling.

N. B.—No member to speak more than fifteen minutes or more than twice upon the same subject without permission.

9th. Exhibitions of Models, Improvements or Inventions with Miscellaneous Discussions or unfinished business.

GEO. F. FOOTE, JOSEPH RICHARDSON, T. H. BURRAS, JEREMIAH MASON, S. W. ROBINSON.	Executive Committee.

Editorial.

THAT "DECLARATION OF INDEPENDENCE."

OUR friend, the publisher of the "American Dental Review," seems not to relish our remarks on his Declaration of Independence. To revenge himself, he brags on our special friend Jno. T. Toland, which infliction we hope to bear with becoming meekness. But we are at a loss to know why he calls Toland our "*sub.*" Is our friend L. "sub" to all those independent editors of his ? Verily, if *sub* means *under*, John is not sub to anything, except that he is *under* a fair way to eclipse every body else in the sale of dental materials.

Dr. L. tells us that it is unfortunate we did not *see* somebody beside ourself, and suggests that we might have seen the writer that stigmatized certain parties as "Sutlers of the regular army." Well, we did take *two* straight looks at that fellow, as the pages of the "Register" will manifest.

In conclusion, the Doctor reminds us that he has a great variety of *ripened* experiences, which may be all true enough ; but as he is still young, some of these must have matured early. We hope, however, that they are sound at the core—not rotten, or wormeaten, as is often the case with fruits which ripen so much faster than other specimens on the same tree. But as Dr. L. disclaims any wish to intimate that his editors are likely to be more independent than others, we are sorry we said anything. We'll "rub it all out," Doctor. W.

SENSATIONS ATTENDING ARTIFICIAL DENTURES.

We have occasionally observed conditions attending artificial dentures, particularly in full sets, for which we are unable satisfactorily to account. We will illustrate this subject by giving the experience of a lady who is wearing a full set of teeth.

Mrs. D——, about thirty-five years of age, has been wearing a full set of teeth between three and four years; she experiences some sensations similar to those of the natural teeth, for instance, after eating fruit, or using acids, she experiences that very unpleasant sensation commonly known as the teeth on edge; it is attended with all the unpleasant sensations of that condition upon the natural teeth, amounting sometimes to apparent soreness. Her teeth also sometimes seem as though they were almost ready to ache. Food or foreign substance between them, causing pressure, produces the same unpleasant sensation experienced when a foreign body is between the natural teeth. In this case the plates, which are of gold, fit well in the mouth, and the teeth antagonize very accurately. Now, we might be disposed to charge this somewhat to the imagination, were it not for the fact that this is just the experience of a number of others, which has been given us.

We will be quite thankful to any who will answer two or three questions in regard to such cases, clearly and definitely.

First, What is that condition of the natural teeth, commonly known as the teeth on edge? Second, How is it produced on artificial teeth? Third, How is the sensation of pressure exhibited on artificial teeth on plates? T.

UNUSUAL PROTRUSION OF THE INFERIOR MAXILLA.

In ——, 1859, I inserted a full set of teeth for Mrs. B—. The relative position of the inferior jaw with the upper was very good. Platina plates were made, which fit the gums well, the teeth were ground on to antagonize very perfectly, according to the ordinary arrangement, the superior anterior teeth closing over the inferior just sufficient for a good antagonism. Molars and bicuspids of both jaws had prominent cusps, so that they locked well together. The patient used the teeth well for masticating in a very short time. Within eight months, however, there was so much elongation or protrusion of the inferior jaw, that the inferior teeth came outside of the superior front teeth, and could not be brought inside by any movement of the jaws the patient was able to make. The whole antagonism was destroyed, indeed, at the end of nine months could not be brought together, and the molar teeth closed at irregular intervals. This produced a fracture of the inferior piece at the median line. In consequence of this derangement, the teeth were deficient in utility. The plates were not changed from their positions upon the gums, nor the teeth upon the plate, except those upon the lower plate, by the fracture referred to, and this could make no material change, for the body held the teeth firmly in their position upon the plate. The teeth of the lower plate were all removed and set in, so as to make proper antagonism with the upper, and it now operates well.

Whether there will be a further protrusion of the jaw, I shall await with patience to learn. Do such cases occur often? What is the cause? T.

THE AMERICAN DENTAL REVIEW.

This journal has made its appearance under its new editorial control. The first number makes a fine appearance,—that is, it looks very much like its predecessors. The three "*nom de plume*" editors appear to work well together. Their "Salutatory" is pretty, apologetic, and short, thus evincing correct taste, modesty and good sense. They hope their "incognito introduction will not be unwelcome to the fraternity;" and we assure them it will not in this direction. Their signatures are, respectively, D. D. S., M., and A. B. The first may mean that its impersonation is a *Doctor* of *dental surgery*, or that he intends to *do decidedly strong* writing. The second, "M.," is the *middle* editor—the *hub* around which the others revolve. The third is a *bachelor of arts*, and is likely to be *after* the *boys*, so we had better look out.

We like the "Review," and always did; and we expect to like t still better under the new arrangement. W.

CONCAVE CORUNDUM WHEELS.

We have been using a new form of corundum wheel, invented by Dr. John G. Hamill, of Lancaster, Ohio. They are made cup-shaped, or rather, they are hemispherical, and about the thickness of the ordinary corundum wheel. When adapted to the shaft, they present on the upper side a large convex surface, and a circular edge or rim of a different form from that of the ordinary wheel; there is also on the inside a concave surface, that can be used if required. This form of wheel adds much to the facility of grinding teeth; it will not supersede other forms, but it is a valuable addition, and one for which the profession is certainly under much obligation to Dr. H. T.

WEBSTER'S UNABRIDGED ILLUSTRATED DICTIONARY.

We have received a copy of this magnificent work, and have examined it with some care, particularly with reference to the additions made to, and the improvements in this work, and can not but express our gratification that so noble a work has been accomplished. It has all along been received as the standard lexicon, wherever the English language is spoken. To say that the work is perfect, is more than we can do of any human work, yet it meets the requirements as fully as we can well conceive. It is a work that none can be without, and be just to himself. The illustrations are well executed, and many of them are very striking; they make an impression upon the mind, especially of young persons, that is far more permanent than can be made by any ordinary definitions or even description. There is also added a large range of synonyms, which add much to the value of the work. There are other additions, too, for which it should be highly prized. The work is neatly and substantially gotten up, as much so at least as any work of that kind can be. It has been suggested that it should have been published in two volumes, but the student would find that arrangement very inconvenient, having to turn so constantly from one to the other. T.

MAD RIVER VALLEY DENTAL ASSOCIATION.

This Association had an interesting meeting in Urbana, April 5th, and adjourned to meet in Dayton, July 3d. Delegates to the National Society were appointed, and also alternates—the delegates having power to fill vacancies, should any occur. The afternoon and evening were spent in discussions, reading essays, etc. W.

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Original Essays and Communications.

THOUGHTS ON FANG FILLING.

BY GEO. WATT.

The first article in the present volume of the Register is headed as this one. In that we endeavored to set forth our views on the subject of fang filling. We have followed the same practice invariably since, and have found no good cause for change. We reported a few cases then, and referred to their condition afterward; and we are now ready to report on them again. Will the reader turn back to the first article, in the July number, and compare the cases, as then reported, with their condition now?

No's. 1, 2 and 3 are all right, and No. 4 was in February; No, 5, slight periostitis of same tooth, early in the winter, which soon terminated in resolution; No's. 6 and 7 all right, and No. 8 was in February. No. 9, as previously stated, was all right till the death of the patient.

Without trying to be systematic, we will refer to a few other cases.

Case.—Mrs. C., aged thirty, bilio-nervous temperament, health bad—predisposition to phthisis. An upper central incisor badly decayed, pulp dead, and abscess formed. The decay was removed, the canal cleansed, and, by means of cotton wrapped on a proper sized quill broach, creosote was pumped into the canal till, by its escharotic effects, it showed its presence at the outlet of the abscess. The canal and cavity were immediately dried, and the tooth was filled in less than two hours from the commencement of the treatment. The discharge of pus ceased immediately, and the abscess was totally healed in a few days. The canal was not filled. This operation was performed about the middle of May, 1859. In February all was right. There had been no return of the abscess, no periostitis—nothing unpleasant in any respect, though the patient's health continues bad. Does any one think we would have succeeded better by filling the fang?

About two years ago we filled two upper bicuspids for Miss P. These teeth were badly decayed, and very much discolored. The pulps had been long dead. After the removal of the decay, a prolonged use of hypochlorite of soda partially restored their color. The crowns *only* were filled. At the end of a year they were considerably darkened. A few months ago we extracted one of them, and about a month ago, the other. We found, what the patient might have told us, that the hard worded operation of "Risodontrypy" had been performed on both. We have no comments to make, but will simply add that, though we have practiced this method *exclusively* for three years, and *generally* for a much longer period, yet these are the first and only teeth we have extracted after treating them as described in our former article. How many such others have extracted, we have no means of knowing. Having carefully tested this practice for more than *six years*, and found it satisfactory, we expect to continue it.

We have been sometimes instructed, frequently entertained, and oftener amused by the objections offered against the practice.

In the January number of the *Cosmos*, a correspondent, "A," after almost acknowledging that our success has been satisfactory, adds, "If (as in most cases it is) an exceedingly thin layer of dentine is sufficient to protect the pulp from any very important changes on account of gold fillings, why is it that the periosteum should be very seriously affected by gold in the fang of a tooth, with the entire wall of dentine between the gold and the periosteum? Will Dr. Watt tell us?"

This correspondent takes a singular course to obtain information. A person who *sincerely* desires to be informed seldom addresses another by *name*, while withholding his own. Then, he asks through the *Cosmos*, while he should have remembered that we *write for the Register*. But, as we are well acquainted with our friend "A," as well as with his motives, we wave all these considerations.

The exact condition of a tooth without a pulp should be well understood, and borne in mind. If the tooth depended wholly on the pulp for its vitality, it would become a foreign body by the death of the pulp. Its vital connection with the system is sustained through the periosteum. To accomplish this, the periosteum takes on increased vital action, which is evidenced by the fact that the periosteum of the pulpless tooth is usually, if not always, more sensitive than that of the normal one. This increased vitality brings it almost to the point of inflammation. From the nature of the tissue, its circulation is easily disturbed, a very slight cause being often sufficient to bring about the change from its ordinary state to that of inflammation. As to the thin layer protecting the pulp, the tooth is then in its normal condition —possesses both its sources of vitality, and is, therefore, better able to withstand the evils of change of temperature. Besides, the circulation of the pulp differs from that of the periosteum, being far less liable to obstruction from depression of temperature. And, where a gold filling is inserted over a very thin layer of dentine, without the intervention of a non-conductor, the pulp, in most, and probably in all successful cases, protects itself by a deposit of bony matter. The same correspondent suggests the alternate application of a hot and a cold instrument to a gold filling inserted as perfectly as possible in the nerve cavity and crown;

and, after intimating that it takes the patient sometime to distinguish the hot from the cold instrument, he concludes "that *dead dentine* is almost entirely a non-conductor of heat or cold."

I suppose no one will claim that dead dentine (or any thing else) is a conductor of *cold;* but his suggested experiment does but little toward showing that it is a non-conductor of *heat.* It may be thus demonstrated that the periosteum has but a slight nervous endowment; but we knew this before. If its nervous endowment was equal to that of the pulp, does A. think we could use our teeth in mastication? But if the periosteum possesses but little feeling in its normal state, does that justify us in torturing it into a state of inflammation? We prefer to avoid any course of practice which tends toward this.

We have been somewhat minute in answering this correspondent of the *Cosmos,* not that we can see any special force in his remarks; but, as the senior editor of the *Cosmos* saw fit to publish, and the *three* editors of the *American Review* to republish them, we thought they might be worthy of attention. A. will excuse our delay in answering. He made the request immediately after we had given public notice that we would let the fang filling hobby rest awhile. And at any rate, we are often far too busy with our own correspondents, to be able to respond promptly to those of other journals, even when directly requested to do so.

But, while many have adopted our practice, and are highly successful with it, there is still one objector that might feel slighted if he is not noticed. We allude to our friend of the *Cosmos.* He does not object to our mode because he has tried it and found it a failure. Indeed, from his own statements, it is probable he has never seen teeth treated in this way. He is too cautious, of course, to try it. "Never go into the water, my boy, till you're a good swimmer," said Patrick's mother; and like all good boys, he has taken her advice.

Did you ever hear of the student who, after listening to a lecture on artificial respiration, ran home and tried its effects on a bellows, and finding that it would blow only while the manipulations were continued, pronounced the whole thing a humbug? Our friend, however, has not followed his example. But instead of subjecting the theory we advanced to a practical test—the only way he could tell any thing definite about it—he began his water-soaking experiments which have been before referred to. By these, he endeavored to establish the fact that the serum would accumulate in the pulp cavities, unless they were filled with gold or its equivalent.

Now, it does not follow that, if water will penetrate the tooth substance, in his experiments, it will do so in a tooth treated as we recommended; for the conditions of the teeth are decidedly different. We suggested before that his white wax plug was not reliable; but he tells us it keeps the water out of a glass vial. Is the wax as likely to fit accurately to all parts of a tooth cavity as it does to the mouth of a vial? There is great difficulty in fitting wax so accurately to a tooth that fluids will not penetrate between them. This we learned, *by experience*, years ago. To accomplish the object, we use "adhesive wax," and, while it is still plastic, coat it with collodion. To gratify our friend, we prepared some teeth in this way, tipping the apices with the same material, and put them in water. We examined one three days afterward, and the others in rotation, the last one being submerged for six weeks; and we found *all* the pulp cavities dry. We re-prepared one of them, having filled the pulp cavity with dry plaster of Paris. After soaking this tooth a week, the plaster was still in powder. Will our friend now recognize us as a fellow "soaker?"

But these experiments throw little or no light on our mode of practice. A few successful cases, without a failure, are of infinitely more value. Though our *soaking* experiments annihilates our friend's favorite views, we preferred to have something *on the question*, or at least relating to it. Accordingly, we tried a number of experiments in the mouths of patients. When the teeth were properly prepared for filling we filled the crowns, and had the patients return in from six to thirty days, when we removed the plugs and found, *in all cases*, the pulp cavities dry. We have recently examined over a dozen cases in this way, finding the result as above. In the past year, we have seen many cases, of long standing, in the same condition.

As to discoloration, we are willing to compare our cases with those of our friend. A few weeks ago we saw a central incisor, in the mouth of an eminent dentist, that was filled some fifteen years ago, after the removal of dead pulp, which retained a good color till about a year ago and is but slightly discolored yet, even though the preparatory treatment was not all it should have been.

But we are not discouraged in regard to our friend. He makes progress. In the August number of the *Cosmos*, he says: "The serum, then, having entered the pulp cavity, it remains there;" but in the March number he maintains that *endosmosis* and *exosmosis* take place through all organic structures, whether dead or living, and therefore, of course, if the *liquor sanyuinis* gets into the pulp cavity, it can get out again. But this is of no consequence. We would, however, remind the reader that the inner surface of the walls of the pulp cavity, when treated as we recommend, is no longer an organic structure.

The reader will doubtless notice that our experiments are *practical*, in the mouth, and that they are of several years' standing and are *successful ;* and if they apparently or really contradict the wax and water experiments of our *Cosmos* brother, we can not help it. We are not responsible for any controversy that has arisen on this subject. We freely gave our views, and are content with the reception and treatment they have received. We claim the privilege of speaking as freely about the opinion of others; and we take it.

In the last few months we have met with our professional brethren who have given the practice under consideration a fair trial; and, without exception, they are highly pleased with it.

AMERICAN DENTAL ASSOCIATION.

MESSRS. EDITORS:—As the time proposed for the formation of the above named Association draws nigh it may be well to suggest a few thoughts concerning the "PLAN OF ORGANIZATION" submitted, through the journals, by the Committee appointed for the purpose at the Niagara meeting.

From the report of this meeting, as published in the *Dental Cosmos*, it appears that this Committee was appointed on the evening of August 3d, and reported on the afternoon of the next day. Though the Committee is composed of men of undoubted talent, all will agree that the time was much too short to admit of a matured, or carefully prepared report, even if there had been nothing to distract or divide the attention. But when it is remembered that the American Dental Convention was in session, that the place was *Niagara*, with all its attractions, and Blondin besides, it would be unreasonable to expect a suitable report from *any* body on such short notice. It seems, moreover, that it was regarded as immature; for on motion of the oldest and most experienced member of the meeting, it was recommitted, "with instructions to *mature*, and amend, if necessary, and publish in the Dental Journals as early as November." It appears, however, that the Committee either thought it needed little or no amendment, or felt themselves incompetent to carry out the instructions. At any rate, they published it immediately, with "but a slight modification."

It is unfortunate that the Committee was required to present its report so soon; for as it was to lie over a whole year, there was no call for haste. True, some may think that, as it was to be subject to revision and correction at the next meeting, it mattered but little what kind of a report was presented. But all such reasoning is fallacious. The farmer can do much neater plowing in an unbroken sod than where numerous strong furrows have been drawn. The builder is much more likely to erect a good structure on a naked lot, than on a defective foundation already laid. On the same principle, a defective, unmatured report, lying on the table, is a serious nuisance to any meeting.

When such a committee has more labor assigned to it than can be properly performed in the stipulated time, it becomes necessary to slight the work, or to *copy* the plan of some other society; unless one of its members has a "cut and dried" article ready for presentation, which would be a fortunate arrangement, if these over-willing *cut and dry* souls were always as competent as they fancy themselves. From the report of this committee, it appears that the copying expedient, at least, was resorted to; and it is quite probable, the "cut and dry" was coupled with it. The plan submitted "is based upon a constitution that was framed by some of the brightest and best minds of our country," we are told, which may be all true; and these "best minds" may have framed a very good constitution, but it does not follow that it is, in any way, adapted to the wants of a dental association. While Smith is corpulent, and Jones is slim, Smith's coat will not fit Jones, even though "framed by some of the brightest and best (tailors) of our country." We are reminded of the school boys who, on being appointed to draft a constitution for a "*Boy's Debating Club*," presented the rules and regulations of the "*Society for the Relief of Indigent Lying in Women*," and insisted on their adoption, on the ground that their mothers, who framed these rules, knew a great deal more about societies than they did.

But the report is as good as can be expected from the time allowed to the Committee. They might have done more however, in the way of amending, when it was referred back to them; but it is usually much easier to prepare a new document, than to perfect a seriously defective one. Under all the circumstances it is little wonder that the report is verbose and ambiguous, that it frequently "sets the rules of grammar at defiance," and ignores the science of rhetoric. The Committee had not *time* to make a concise and accurate report, much less to consult and deliberate as to the great wants of the profession in reference to a new national organization.

But the document is now before the profession; and it may become necessary to make the best of it. It is composed of six sections, regularly named and numbered, and two additional divisions or sections, *not numbered.* The boy's excuse for not counting the little spotted pig was that it wouldn't keep still enough. The reason for not numbering here is less obvious.

The first section treats of the NAME, and declares that "This organization shall be known by the name, style and title of the *American Dental Association.*" Now, though good taste would require the omission of "style and title," yet, as it is important to let the world see that dentists can use a good many words, it would be well to retain them, and supply, in addition, the words, *appellation*, *denomination*, and *cognomen*, as likewise nearly synonymous with name.

The third section refers to MEMBERS, and proposes to have *delegates*, *members* by *invitation* and *permanent members*, all to have the same powers and privileges. The members by invitation are to be reputable practitioners from sections of the country not otherwise represented. They are to "receive their appointment by invitation of the meeting." This is certainly very indefinite, and liable to great abuse. As few in the profession have the firmness to vote against the invitation of a brother who is present, even though they regard him as not worthy of membership, many are likely to be admitted that will not be desirable members. There can be no objection to inviting such a set as consultative members;

but to allow them to "vote on all questions" is carrying the matter of courtesy a little too far.

There are two provisions for becoming "permanent members,"—by receiving a unanimous vote of the meeting, and by being appointed a delegate once in a lifetime; for we are told that these "shall consist of all those who have served in the capacity of delegates." Now, let us adopt this, and we who have the good fortune to be delegates at the first meeting can, ordinarily, control the affair ever afterwards. What if our constituents do not approve of our course? They can not set us aside. True, they can elect other delegates; but we can go with them, and, at least, tie their votes. We will have all the advantages of experience, while they will be but fresh recruits. I rather think we will all vote for this clause; for who is such a fool that he will not vote himself into a place of power, when he has an opportunity to do it? But, seriously, if it is the intention to admit any but delegates to the full membership, it is folly to waste time in effecting an organization.

The fifth section refers to OFFICERS. "They shall be nominated by a special committee of one member from every State represented at the meeting, and shall be elected by vote on general ticket."

Who is to appoint this special committee? The President? If so, why not give him the power *directly* to select the officers for the ensuing year, for by this arrangement he can control the matter as certainly, even though indirectly? And if the Association must elect those nominated by the special committee, (and there is no provision for any other candidates,) where is the call for a "vote on general ticket," or any other way? Why not recognize the decision of the committee as final, without the farce of an election under such circumstances?

Only the ordinary officers of an association are proposed; yet we have a long series of clauses defining their duties, just as if no other society ever existed, and just as if custom and parliamentary usage had not definitely fixed the ordinary duties of these officers. "*The President* shall preside at the meetings—.'' Why, of course he shall! Would he be a *president* if he did not preside? And where would he preside but "at the meetings?" "In the absence of the President, one of the Vice Presidents shall assume all the duties of the office." Well, what else is he for? and would he be a *Vice* President if he did not? We are just as gravely told that "The *Corresponding* Secretary shall attend to the *correspondence*—," and that "The Recording Secretary shall keep accurate minutes of the proceedings—," which is certainly as satisfactory and self-evident as that "Bakers bake bread and cakes," or that

> "A sea-horse is a sea-horse, when
> You see him in the sea."

Now, there is, perhaps, nothing sinful in such verbosity; yet, as the credit of the profession is at stake, it should not be tolerated in a document so highly representative in its character as the constitution of the "American Dental Association." Our brethren across the water sometimes allude to American verbosity. Shall we afford them so strong an occasion to do so again?

The sixth section treats of *Standing Committees.* Of the Committee of Arrangements, one member, "if possible," is to "reside in the place at which the Association is to hold its next ensuing annual meeting." Now, if there is any place where it would be *impossible* for one member to *reside*, it would be impracticable for a whole association to *sojourn* there long enough to hold a meeting. If the Committee had taken more time to "mature and amend," when the document was referred back, they would have said, *if practicable*, instead of "if possible;" and they would have corrected a great many other expressions, of which this may serve as a sample.

Then, there is a double-geared standing committee on "Scientific Investigation," one-half of which is to institute a series of investigations and experiments on the "Physiological and Microscopical Anatomy of the Teeth," while the other half is to undergo similar labors with reference to "Chemistry in its relations to Dentistry," and each half, separately, (or both recombined, it is hard to tell which) is to "present to the Association the result of their labors." Why these *two committees*, on subjects so distinct from each other, are ranked together as one, it is hard to see. It would be just as consistent, and quite as convenient, to have but one standing committee, and subdivide it so as to embrace all the duties provided for by the seven proposed in the report.

Another one is called "The Committee on Dental Pathology and Surgery," and is required to take "under consideration every thing that appertains to the pathological conditions of the teeth," etc., and to thoroughly test all improvements in Operative Dentistry. But it would seem that this "consideration" and *testing* are not to be conducted *scientifically*, for the preceding one is the "committee on *scientific* investigation." Moreover, this committee is to report "*before* the Association;" but who they are to report to, or how long before, is not told.

But it is unnecessary to specify farther. No members of the profession know better than the committee that the document needs thorough and careful revision; and, as they have cordially and frankly invited the profession "to consider and remedy its defects"—to remedy its *imperfections* and *shortcomings*—these remarks, offered with the kindest feelings, will not be regarded as out of order. E. T.

PLASTER IMPRESSIONS.

BY DR. S. CLIPPENGER.

Read at the April meeting of the Mad River Valley Dental Association.

THIS may be a very commonplace subject, yet a very important one—second to none, at least, in mechanical dentistry. A correct impression of the mouth is as important to a successful dental structure, as a healthy and well organized brain is to a good *mind*, or a firm foundation to the lofty tower. Without these pre-requisites they will all fail alike to accomplish the end sought for in the outset. Then, let our *motto* be—start right and make every effort to keep right; for without the former we will be as the mariner without his compass, or the unregenerated man who is without the beacon star of heaven to guide him through the journey of time, to the realms of bliss, for they will all fail to accomplish the end for which they were designed. It is important, then, that our material be of the right kind, and of the *best* quality; for both are indispensable to success.

The first thing is to have properly calcined plaster of Paris that has gone through No. 10 bolting cloth, with cup, spatulæ and water and impression cups at hand. Our patient in the chair, (suppose a lady) we instruct her to sit erect, with chin down, and the head inclined forward, to prevent the plaster and saliva from flowing down the throat, thereby preventing the unpleasantness of gagging the patient and spoiling the impression. A napkin should be previously placed over the chest. If the saliva is of a ropy nature, we have the patient rinse her mouth with cold water. We are now ready to mix our plaster and take the impression. We have the plaster of the consistence of thick cream, and stir it till it is free from bubbles, then fill our impression cup and take our position behind and above the patient, so that our waist is as high as her head. Stooping over her, we place the cup in her mouth, holding it with the thumb and forefinger of the right hand, using the index finger of the *left* hand to lift and relieve the lip and cheeks from the cup, using the nose for our guide-board to tell when it is straight. We bring the cup up first in front, gradually bringing the back portion up, thereby preventing air-cells in the impression of a deep palate. After the cup is brought up to its place, we raise the lip and cheeks, in order to let the plaster flow up over the gum. Then placing the index fingers one on each side of the cup, we hold it firm till the plaster sets, which will require from three to five minutes. We then tell our patient to close her lips, (being careful not to let her press the cup with the lower jaw) and fill her mouth with air, which will be forced under the impression, so that we can remove it with ease, unless there are prominences and depressions on the outside of the alveolar ridge, when it will have to be aided by pressing the front portion of the cup upward, which will force the back portion down. Then remove the cup, and if any of the impression is broken off, we are careful to examine the mouth and get the pieces and set them to their places on the impression. If necessary we fasten them with plaster that they may retain their places while filling for a positive cast. It is thought, by those not accustomed to taking impressions with plaster, that an impression of the lower jaw is difficult, if not *impossible* to be taken. This is a mistake. It is true that it requires more care than the upper, but is not any more unsuccessful. We mix our plaster, fill the cup as for the upper, and, taking our position as before, turn the cup over quickly, holding it in the right hand, with thumb and finger, using the index finger of the left hand to relieve the lip and cheeks from the cup, and place the cup in, using the nose as our guide. We are careful to see that the lip and cheeks are kept out, so as not to get under the plaster; and have the patient to keep the tongue back as much as possible. Now we press the cup down first in the back portion, gradually bringing it down in front, so as to keep the plaster in the front portion of the mouth. Then we hold it firm to its place, by putting our thumbs, one on each side, letting the fingers pass under the jaw, we keep it to its place till the plaster sets. Then remove it as before, only press downward instead of upward, so as to start it in the back part first.

If we observe the above precautions, we can not fail to get a true cast; but if we fail to take these, we may expect to fail in getting a correct impression. It *always* requires care on the part of both patient and operator: but if that is done we have the satisfaction of knowing that we have a correct start for our dental structure, one that can not be pressed out of shape without our knowing it, as may be the case with other materials used for that purpose; for if it is broken we set it up again, and go on as if nothing had happened, feeling assured that we have a cast that is a fac simile of that portion of the mouth designed for our purpose. If the gums, palate, or any portion of the mouth from which we wish an impression, be soft or spongy, it does not press that portion out of shape, but we have a correct cast, which we all know is indispensable to success in fitting the mouth with a plate, let that be of whatever material or composition you may choose. Well, says one, *I* can take just as good an impression with *wax* as *you* can with plaster. That we think is impossible. My friend, have you ever tried plaster? Yes, two or three times only. Well, that is just often enough to set you against the use of it; for you would be excited all the time, minding every thing that you ought not to, and thinking it would probably be a failure. You were destitute of *faith;* and all you could do would just make a muss, and a failure was the consequence. You must remember that without faith there are no works that are successful.

I have tried both, and find plaster to excel wax, as far as gold excels amalgam in preserving a tooth. With it your impression is perfect. It settles to every part without changing them in the least. As far as its being *filthy*, there is not a particle of filth about it; nor is there any sickening taste to it, for it has no taste at all; and, with proper care and experience, you will be able to avoid all the muss that you so much dread, unless you are one of those would-be operators that make a muss out of every thing they undertake to do. Then, you are a hopeless case, unless we can get you to do your first work over, and learn anew. Then, if you have a proper *tutor*, you may learn to keep your hands and person clean, as well as your instruments, napkins, and other appliances, such as spittoon, glass pitcher, and your *mouth* which is *last* but not *least* important by any means.

THE MALLET.

BY J. TAFT.

The method generally adopted for consolidating gold, in filling teeth, is by pressure of the instrument with the hand alone. With perfectly formed points and skillful manipulation, by this method the work is very well accomplished, though not so perfectly as it may be done.

For consolidating the gold in filling teeth, we have for three months past, been using the mallet almost constantly. We adopted it at the suggestion of Dr. W. H. Atkinson, and from personal experience. We had always previous to this, regarded its use with distrust, entertaining the very common notion that its use would always be unpleasant to the patient, and in many cases painful, and would be very liable to produce periostitus; neither of which in our experience do we find to be true. The objections which originally existed in regard to the use of the mallet, were doubtless, real objections, that originated in the method of manipulating, the condition in which the gold was used, and especially from the kind of instruments that were employed. Gold is now used much lighter, in better condition and in smaller portions, than in the early periods of the profession, and it is thoroughly consolidated as it is introduced. Formerly the greater part of it was introduced and then consolidated, and necessarily required a great amount of force, to attain anything like a thorough condensation. Then large blunt pointed instruments were used; now, small, finely serrated points are used. Formerly, it was not unfrequent to have periostitus, as a result of the pressure in filling. Now no good operator has such results under favorable circumstances.

These circumstances and changes render the mallet now available, whereas once in the hands of almost all our operators it was not. The question naturally arises here, what are the advantages attained in the use of the mallet? Are they sufficient to compensate for the employment of an assistant? In answering one of these, both are answered.

One thing attained, is a more perfect condensation of the gold, and a more thorough welding than can be made by the gradual pressure. Every one will perceive this at the mere mention of it. The gold will be anchored in its position with much more facility than by the hand pressure. The instrument always acts under the mallet upon the designed point, does not slip from its position, and consequently there is no liability of abraiding or wounding the soft parts. It is far less fatiguing to the operator, than hand-pressure, and this is a very important item in protracted operations. It is not more unpleasant to the patient than the ordinary method of condensing. Such, however, has not been the general opinion in the profession. Almost all of our patients, after making the experiment, prefer to have the gold condensed with the mallet, rather than with the hand; this, however, may arise to some extent from a feeling of greater security, against accident, by slipping of the instrument.

We will give two extreme cases—occupying opposite extremes however—in practice with the mallet. The first was one in our own experience. It was a second, left, superior molar; pulp had been destroyed about a year; during which time there was chronic periostitus, that rendered the use of the tooth impracticable; being more or less soreness all the while. The canals of the fangs were cleaned out, and treatment by creosote and iodine employed with a view to restoration of the parts to health. The time employed by the treatment was very brief, not sufficient to mitigate the symptoms to any considerable extent; from the beginning of treatment to the end of the operation, was only about twenty-four hours. The applications were made one day and the operation performed the next. Before the operation the tooth was so sore as to be quite painful on a slight pressure; but the whole operation of filling the fangs, the pulp chambers, and building up nearly one half the posterior portion of the tooth, was accomplished at one sitting, and occupied about four hours. The gold was condensed from the points of the fangs to the completion of the filling, by the use of the mallet, and without pain from beginning to the end. My apprehensions were very serious at the first, but I was very much surprised to find that the blows from the mallet, did not produce actual pain, and quite as much surprised to find at the close of the operation that there was far less soreness than at the beginning. It continued to improve, and at the end of ten days the soreness was all gone, and the tooth quite as comfortable as though it had never been diseased, and still remains so, now about three months, and the confident expectation is, that it will continue so.

I now present a case of a very different character. About the 15th of March, I filled several teeth for Dr. W. A. P. One of the number was an incisor, having approximal decay, exhibiting medium sized cavity. There was no sensitiveness, at least from an approaching exposure of the pulp. The indications were that the tooth was perfectly healthy. The cavity was excavated and filled, the gold being consolidated with the mallet, without any thing unusual thus far. We will now introduce his own statement in regard to the result. "The next morning after the operation, while at breakfast, I found the tooth a little sore. I could not bite on it without pain; by avoiding it, as much as possible, I finished my breakfast without much inconvenience; there was tenderness at the apex of the root, which was soon followed by congestion on pressure, but as yet no visible swelling; my lip felt stiff and uncomfortable, and it was not fully under control of the muscles, yet there was no pain. Arrived at home, I took measures to subdue the irritation, but I found it did not respond to them as readily as I expected it would. I painted the gum with tincture iodine, applied the compound myrrh wash; took Iodite, Ferrii, internally, and drank a bottle of congress water every morning, before breakfast, for a week. The counter irritation and the other remedies held the inflammation somewhat in check. The tooth was but little sore, or longer than the others, and there was but little oscillation; pain slight. Tuesday there was a hard lump, as large as a small hickory nut, immediately under the left Ala Nasi, but no fluctuation. Wednesday much the same. The swelling more acceptable, having extended further down on the gum. Tooth but little sore, and no fluctuation. On Thursday the same, and swelling slightly diminished and less induration. Friday, the tension much diminished, some fluctuation, pus still deep; fair prospect of its absorption, tooth not very uncomfortable. Friday evening, pus nearer the surface, judge it to be small in quantity, absorption taking place, induration and swelling much diminished, as well as the infiltration of the lip, still difficult to talk and laugh, even if so inclined. In a fit of impatience I resolved to relieve the absorbents with the lancet, as the pus had better be removed through the mouth than through circulation. I had to cut quite deep, and brought away two drops of pus, with considerable blood. Taking care to prevent healing by first intention. The discharge continued for some time. The swelling rapidly subsided and I was myself again on Monday morning, with no visible sign of the rather disagreeable than painful swelling I had just experienced. I do not certainly know that the nerve in the tooth is dead; there are some indications that it is not, as the absence of much soreness, elongation and oscillation of the tooth are favorable symptoms. It was but little painful to pressure at any time, and it is apparently as well now as any of the adjoining teeth. The irritation unquestionably arose from the concussion from the mallet on the periosteum, at the end of the root. The external applications I so thoroughly employed, seem to have drawn the inflammation to the surface, and though never great, the soreness of the tooth was diminished at an early period. I suppose the early counter irritation and active stimulation of the absorbents, may have saved the nerve by transferring the seat of the disease to the soft parts outside of the alveolus."

The Dr. subsequently in a communication to us, gave his views more fully and at great length upon this subject, which we shall take occasion as early as opportunity may afford to transfer to the pages of the *Register*, with such remarks as we may deem proper.

This is the only case, so far as we are aware, in which any unpleasant symptoms have occurred, from the use of the mallet, in the almost constant employment of it for three months. Dr. P. had other teeth filled at the same time, by the same process, which exhibited no unpleasant symptoms. In filling, however, by any method, the small single fanged teeth require care, lest they suffer irritation from the pressure employed from condensing. I suppose the difficulty occurred in this case, from strokes of too great force being employed. But I have seen the same thing occur after condensation by hand pressure.

It is quite obvious that a tooth with two or three large fangs, and consequently a greater amount of attachment, will tolerate with impunity a greater amount of pressure or force of any kind, than one small single fang; so that as the amount of attachment is less, the amount of force or pressure for condensing fillings should be correspondingly diminished.

We shall have occasion to refer to this subject again ere long, and will reserve any farther thought till that time.

PATHOLOGY OF THE MOUTH—EXCESSIVE FORMATION OF EPITHELIUM.

Chronic excess in the quantity, and unusual tenacity of adhesion of the epithelial scales of the mouth, occurs in some persons, but this disease is not very common. Persons thus affected, even while in ordinary health, have a thick, yellowish coating upon the back part of the tongue. On the advent of any morbid derangement of the digestive apparatus, the coating covers the tongue quite to its tip, appears white, and uniformly distributed. It is a disease that is more frequently met with in those whose skin is inactive, with derangement or obstruction of the sebaceous folicles.

Treatment. Although this derangement does not produce much active distress, yet the *disease* that produces it demands treatment, which, however, consists in avoiding the producing causes, rather than in active medication. Smoking tobacco always increases this trouble, and the accompanying distress at the pit of the stomach. Opium, as well as tobacco smoking, produces this kind of furred tongue in well persons, and where the condition already exists neither tobacco nor opium can well be borne.

ACUTE INFLAMMATION OF THE MOUTH.

Acute inflammation of the lining of the buccal cavity, when not produced by local agents, like similar acute inflammation in any other part of the system, seems always to be a result of a previous derangement of the fluids of the system.

The papillæ become swollen, prominent; do not shed their epithelium, which becomes harder and more tenacious than natural, and rising with the papillæ gives them the appearance of being short hairs, and the tongue of being *furred*, and not simply *coated* as where there is only an excess of epithelium.

When the tongue is *furred* it indicates that a febrile, or inflammatory change has occurred in the blood, and that the whole system is affected with a disease, for a cure of which *general* treatment will be required. The derangement of the alimentary canal may also be great, and require special attention. But a *furred* tongue always indicates a change in the fluids of the body.

Treatment. In the treatment of acute inflammation of the mouth, the derangement of the general system, and consequent demand for general treatment must never be lost sight of.

When the mucous membrane of the mouth and stomach is inflamed, there appears to be a difficulty in regard to the transmission of fluids through the membrane, and hence the system suffers from a deficiency of fluids and thirst of fevers is felt, often the sense of thirst leads the patient to drink copiously, but the fluid drank, not being absorbed from the stomach, passes into the intestines, and thence out, causing purging or a continuous diarrhœa. When the evacuations are produced by the non-absorption of the drinks, it is not proper to check them; for, in addition to relieving the stomach of its superabundance of liquid, it washes away the epithelium which has been shed as well as any other effete matter that has found lodgement in the alimentary canal. As in the treatment of Catarrh, so in this form of disease, the cautious and proper use of laxatives and diluents are beneficial and rational.

So, also, the use of agents that increase the amount of flow through the kidneys and the skin will not only lead to an increase of absorption from the mouth and stomach, but at the same time lessen the inflammation and tend to cleanse the tongue of its fur. Blood-letting will sometimes apparently cleanse the tongue; but if it produces any notable debility, bleeding causes the coating to become sticky, smooth, thick, and of a brownish color, and dryer. The stain produced by medicine or food upon the tongue *may* be mistaken for the changed condition here referred to; but with proper observation and thought such mistakes are not likely to occur.

Inflammation of the mucous lining of the mouth may occur in Catarrh, but such attacks are transient, and require no special treatment. Usually more attention must be paid to the general condition of the system that caused the local disease than to the mouth itself.

ANÆMIA OF THE MOUTH.

The Anæmic state of the lining of the mouth is more readily distinguishable by the appearance of the sub-epithelial blood-vessels than by the change it produces in the epithelium or the papillæ.

The first change noticed, may be that the tongue is somewhat swollen or tumid, and the papillæ appear enlarged. The epithelium appears nearly white as though the tongue was parboiled, thickened, soft, wrinkled, forming furrows, with a large number of epithelial scales floating in the saliva, giving it a whitish obaque appearance and an unpleasant taste. The breath has a peculiar unpleasant odor, doubtless also caused by the decomposition of some of the epithelial scales, a large amount of which are floating in the saliva or adherent to the teeth.

After the disease has progressed, the tongue becomes smoother and clean, the epithelum not having been formed as fast as washed away; the papillæ are flattened, the surface of the tongue quite smooth, the breath loses its unpleasant odor, the tongue becomes pale, flat, and so broad that the edges press against the teeth which make indentations in its border and its tips that remain quite a long time.

The anæmic state of the tongue always indicates a *general*, not local disease. Local diseases, even of the stomach, do not produce this anæmic condition of the mouth. Ulceraation, and even cancer of the stomach or œsophagus do not lead to this condition: neither do derangements of the liver, the spleen, the kidneys, nor of more distant organs.

Sore throat, bronchitis, a decayed tooth, *may*, however, greatly modify the appearance of the mouth and tongue; so that it is always well to observe if there is any immediately adjoining disease that modifies the appearance of the tongue. So, also, if there is much disease of the tooth upon one side of the mouth as to cause the other one to be used exclusively in mastication, the epithelium not be worn away upon the other by the food, may give it the appearance of being diseased even in a state of health. The use of tobacco causes such a modification in the appearance of the mouth and tongue that its influence should never be lost sight of. So also does the habitual presence of many other things in the mouth; and it is well, always, to become acquainted with the habits and occupation of all whose mouths we are called upon to inspect.

PERFECT FILLINGS.

BY W. H. A.

Is it possible to produce a perfect filling?

Before answering this query, it will be well to define a little, for here as elsewhere he who is the most successful in clear definition will best succeed in instructing.

Perfection has two grand divisions of signification, *viz:* The *absolute* and the *relative;* the former never attained in any but its own primal and immutable state of ideal existence. And it is only perceived in the abstract—whose grandeur grows upon us as we, by degrees, begin to be able to take in more and more of its magnificence and beautiful and limitlesss proportions—precluding the possibility of its residing in relative things but in an infinitesimal degree.

As to absolute perfection of any thing, but in principle, I suppose there is no dispute among thinking practical men.—But approximate perfection, I presume, almost every one will as certainly claim the ability to attain; even those who have enveighed most severely against the term have tacitly, if not distictly, laid claim to the exercise of this last definition, and no doubt worthily.

A perfect filling would be one that restores the tooth to pristine *usefulness* and beauty—these qualities required in the degree capable of being judged of by the unaided natural powers of observation; *usefulness* comprising the necessary density to resist mechanical action and not wear away faster than the tooth-substance.

Impermeability to ponderables and imponderables in the same appreciable degree of normal structures. *Beauty* consisting in agreement of color and contour, and brilliancy as to polish with the natural parts.

These conditions fulfilled, we have substantially and practically a perfect filling. I do not say that a powerful lens might not expose a great want of perfection in color and arrangement of integral points, etc., etc. An impervious shell of indestructible material—so adapted to the walls of the cavity as exclude air and moisture from without, and the requisite stiffness to withstand the ordeals of mastication and hermetically sealed *is* a perfectly *useful* filling just so long as it retains its integrity.

I am aware that I have, in my definition, required for a perfect filling, conditions never heretofore attained in any given case—for the plain reason that we are not yet in posession of any substance capable, by present known manipulations, of attaining these ends. Some one or more of the requirements being wanting, in even our best modes, with our best means. For instance, gold is not of the desired color—the same is true of any single metal or other substance capable of resisting the fluids of the mouth. Neither is, even this otherwise admirable substance capable of transmitting the imponderables (heat and electricity) in the ratio of the natural tooth-substance; rendering it, in this respect, far from a perfect substitute, and requiring the life forces to accomodate themselves to new conditions to make success predicable in a *useful* degree.

In all substances where the *color* has been attained it has unfortunately been the only condition of a perfect filling approximated—all the other requirements being so feebly expressed as to force us to set such fillings down very far in the scale, certainly as low as fourth or lower in order of merit.

What degree of approximate perfection in a filling *is* necessary to save a tooth during the time it will probably be required for use?

This *is* a question in very deed, for so various are the circumstances of teeth in the same mouth, to say nothing of different degrees of attention as to cleanliness and care vouchsafed to them in the mouths of separate individuals, that a filling quite good enough in this respect to save a tooth in some situations, entirely fails to be of service in other positions, as to location, exposure, etc., etc.

So that we must be thrown back upon individual judgment and ability in specific cases; showing us the imperative necessity there is for us to be up to the exigencies of all possible cases that might present themselves at any period of our practice by a thorough understanding of the *principles* which always underlie *correct* practice, before offering our services to the public, if we wish to escape the unpleasant ordeal of having to make apologies or retain a suspicious silence when taken by surprises in the presentation of cases we are not prepared to encounter successfully.

I fancy I hear on all sides the plaint—"Oh, please don't say such discouraging things if you do not wish to disgust us, not only with ourselves, but also the profession, so difficult of attainment in any respectable useful degree!"

To which my reply is there is no need of any really honest, earnest mind being thus affected in view of the difficulties in the way of really useful and demonstrable advancement.—

For corroboration I need only point to the almost magic progress the profession has made within the last quarter of a century.

Who at that time had the boldness to state to his patient that "Artificial Teeth" were expected by the most sanguine to answer the purpose of "*Mastication*?" And who now would be content to call his effort a success that did not effect this desirable and necessary purpose? or what Utopian of that day dared attempt the salvation of a tooth with a cavity penetrating to any considerable degree the dentine? to say nothing of the possibility of saving it by capping, exterpation, or other means so universally successful now?

I remember very well the sage advice of the *masters* of those days. And what do you suppose it was? Simply this, "Don't risk your reputation upon any cavities except those in the grinding surfaces and they small at that."

In which advice they not only discouraged all young and inexperienced operators, but also imprisoned themselves in a narrow compass of usefulness, that has wrought untold mischief to the profession and the world and been the specious pretext to invert the order of the exercise of skill by giving undue prominence to "Artificial Dentures" by establishing a preëminent *necessity* for them, instead of boldly laying the axe at the root of the evil, and thus avoid the loss of the natural organs by *timely* operation for their *sure* salvation.

Master must also be *pupil*, if he be not content in the time to come to stand relatively where these old masters now stand.

For our particular calling is no exception to the great *grand rule*—of progress coming to a profession from, in the main, without its own accredited means of advancement—quite as often as in the line of anticipated acquisition.

So fellow members!—earnest workers! you need not be astonished if you wake up some fine morning and find the fogs of your "*better judgment*" cleared away and see yourselves quite capable of exercising the functions of true *master*, or demonstrative teacher of all patent principles hereunto belonging.

And although I have portrayed the profession in infant state, I am sure to hail *many*, now in that necessary condition—in a vigorous childhood! and youth! and *some*, in the plentitude of an erect manhood of Professionability! I am aware of the wrath in reserve for those who plainly tell the little boy that he is yet but a babe or child when he feels the Young America Spirit of ambition stirring within him! I also am aware that it will die out as soon as they, like him, have outgrown their small dimensions, and think more of principles than means!—of the Profession than its members! The first being absolute and enduring, the other relative and transitory.

◆

SUCCESSFUL DENTAL OPERATIONS.

In the exact ratio of soul agreement between the operator and patient will success crown their coming in contact.

Temperament and tastes alike—both are more likely to be pleased with each other, which is one of the prime conditions of fitness to operate or be operated upon. Let antagonism spring up between an operator and his patient and my point will soon be proved, for they will be in haste to get rid of each other, and for the time give more thought to this *feeling* than to a cool and sensible calculation of how much they can combine their efforts, earnestly to attain the highest results for both.

Careless, rough, *unfeeling* operators, should never have patients upon whom to display these repulsive qualities, no more than testy, squamish, unreasonable, exacting patients should demand only the delicate, feeling, competent, and good operator to serve them; not only *doing* the *work* in the best possible manner, but, also, required to bear their part and the patients also, unduly wearing themselves away for unappreciated services. For all such incongruity tends to the performance of a service far from successful, in the sense satisfactory to the after thought of either conscientious operator or honest patient.

The anxiety to get through an irksome task often proves an efficient barrier in the way of success—resulting in getting what they call "through-done." But be assured all such operations are not permanent or paramount.

No operation should be "irksome" to patient or operator in any case, and I am happy to be enabled to announce "the time has come when there is no longer any *need* that it should thus be."

Any operator who attempts to operate when he is not in proper condition is sinning against not only himself, but his profession, as well as those he essays to serve under such circumstances, as certainly as if he attempted to exercise his handicraft, (I will not say skill) on an organ, prematurely! because he lacked knowledge, time, patience or honesty to first put it in proper condition to ensure a certainty of restoration.

When I say that it is necessary to success, that an operator come near the "heart" (feelings) of his patient (if fine) I do not mean to endorse in the slightest degree that mawkish palaver and senseless expression of regard, that is the best evidence of absence of real interest in the personality in question, in every sense but the low one of what *money* can be made by such "*arts*." But I do wish to be understood to affirm that it is necessary for the highest rendering of dental service, that we make every step, from the first inception of the survey of the case all the way through, a careful and lucid diagnosis and completion of the necessary work, a matter of personal religious duty. To do which there is usually but one special barrier, out of the range of the operator's own mind, viz: that unfortunate element called price. If the dentist could be so situated as to take no thought of this at all until after all the elements of price had been made to enter into the work, a much more satisfactory, because more strictly intelligent mode of arriving at this vexed question would have been secured. The only successful operations are those that are absolutely *thorough*, no half-way "guess it will do" sort of work *can* fulfill the demand for the only kind of work that should ever be suffered to be put into the mouth of a human being!

For be it kept in mind that the moral state is in a great degree dependent upon physical conditions, especially of the digestive apparatus. How many times have we been almost entrapped into this loose way of turning off patients for fear they would think it was for the pay in the pecuniary sense, we were so sharp in finding all the incipient cavities and pointing out the advantage of an early attention to them!

I presume every operator of considerable experience has at some time in his life had cause to regret his cowardice, lack of manly independence in just such cases, when his patient has returned to have a tooth "*extracted*," that had but a small cavity in it, when last in the chair. And had been notified to have an eye upon that "small spot" that has alas! proved to have been far above the estimate put upon its size and danger—now calling for the exercise of a skill probably out of his or his patient's reach! Out of his when he does know what to do—out of his patient's when the enhanced expense of time and money have gone beyond his ability to meet. And so to get rid of a monitor of the ignorance or neglect of other days, quacklike, closes the tragedy by a "coup demian," and buries out of sight the patent evidence of his weakness—imploring the ability to be able to forget it "that it may be no more a grievous remembrance to him," instead of nailing it in a sure place, that it might be a beacon light enabling him "no more to stand on that particular coast." Thus we have the difficulties, out of ourselves, narrowed down to a single element—Price. For please make particular note, no one will find fault with your services because of their preëminent excellence, if that same bug-bear, *price*, be no part the preëminence. I never have offended any one, when doing gratuitous service on the ground of doing it too well.

Though, nevertheless, some of this class of service has cost me most of time, money, and earnest effort, and I must say has paid my *feelings* better than my highest and most happy successes, where I received pecuniary reward, because above the suspicion of being done for money!

How shall this last *outside* foe be slain?

I. By preparing ourselves to do a worthy, honorable service, without reference to the things to be added—to follow.

II. By convincing the public of the residence of this paramount necessity, in us as a profession.

III. By actualizing our pretentions in careful and correct examinations of *all* the cases with a view to *know* that we may *do* the highest possible service the special example in hand admits. The first step of which is to study the *temperament*—that we may know how to govern ourselves toward the patient, and what to expect of the patient towards us. After we are satisfied one way or the other. If we are incompatibles, kindly, but firmly and frankly tell the patient so and honorably dismiss him in justice to him, as well as to ourselves; for there may be a good operator who is compatible to him and he thereby secure a *successful* service. If esteemed compatibles, the next step will be to *certainly* diagnose the case, upon which either favorable or unfavorable prognosis necessarily depends. If it is deemed proper to proceed to do the work, the way is now made open for a successful operation. If not thought best by one or both to proceed, your *labor* is at an end for which, in justice to all concerned, you should demand and receive a proper compensation, the amount of which no one can so well determine as yourself. In case you proceed to perform an operation—patient, thorough, self-sacrificing effort on your part, will secure the desired end, just in the degree that you first conceive and then fulfill these varied requests. Our victory being now complete as against outside foes and our competency also established, a true professional standing will have been attained.

Does any one require a definition of the true Professional Man?

Not only a gentleman, a scholar, and expert in the use of tools, (I suppose I must say by way of deference instruments) but also a truly religious benevolent man!

Some no doubt would insert christian, well, I would too if not for the multifarious significations that name presents to the perception, many of which did not find soul-room in the blessed Nazarene.

There is a feeble sketch of my scientific successful Dentist.

S.

PIVOT TEETH.

BY A. BERRY, D. D. S.

Dr. Koecker, I think, condemned the insertion of pivot teeth. I heard a dentist, in his chair as anatomical professor in a dental college, say, that to set a crown on the fang of a tooth in the mouth was contrary to correct physiology.

Twenty years ago there were many pivot teeth inserted, but now whether this operation should be performed at all is a question for grave discussion at meetings of dental societies.

When pivot teeth are placed on fangs in tolerable healthy condition, of which the operator has the pleasure of destroying the nerves, alveolar abscess will probably not occur for years, but if destitute of vitality, inflammation, &c., may follow forthwith.

It is not improbable that teeth are often removed, for the insertion of others on plates, when they could be pivoted with greater advantage to the patient, as better preserving the contour of the face, and being less troublesome so long as they do well. To be sure extracted teeth never ache, and replacing them on plate pays as well as by pivot, without risk of pain from the operation.

It may sometimes be proper to place artificial crowns on "*dead roots*," and I give the history of three such cases that occurred before the palmy days of small atmospheric plates.

Mr. H. æt. about 23, in good health, with all the superior incisors much decayed, their nerves dead, and the gums around them considerably diseased. The patient was prepared by telling him that trouble would probably follow pivoting his teeth, but that it was best as it would keep off plate teeth a long time. The gums were treated to improve their condition, and the four crowns firmly set a few weeks after. Severe inflammation followed in two or three days, and the patient was kept from his usual business a few days; but now after a lapse of, I think, ten years, he is wearing all the teeth, and with very little trouble since a few weeks after their insertion.

Mrs. C. with central incisors destitute of vitality and crowns gone, with no teeth that would answer well to which clasps could be attached. Prepared by assuring her that if the teeth were inserted on the fangs severe inflammation would probably follow, &c. The teeth were pivoted and she remained at home from her school the next day with an enlargement of the face; but when last heard from, three months ago, she was wearing the teeth comfortably, as she had for about eleven years, the pivots having been renewed once or twice during the time.

Mr. Mc., with the teeth and gums generally much diseased, the superior incisors with most of their nerves dead and crowns nearly gone, but with no teeth proper for sustaining others by clasps. The gums were treated, and the four incisors inserted by pivoting. Severe inflammation supervened directly; but some months since, nine or ten years after the operation, he was wearing them all.

True, this was heroic practice, such as might not add to the reputation of a young operator, but which, performed with proper discrimination, will generally prove satisfactory to the patients.

TO MY MALLET.—APOSTROPHE!!

BY W. H. ATKINSON.

Good morning, old comrad, I hail thee with joy
And thank thee sincerely for thy *timely* aid:
Indispensible helper and not a mere *toy*,
The tribute that's due thee, though late, shall be paid.

I acknowledge thy (*a*) "Merit" and value thee (*b*) "More"
As thy power looms up the better we know thee—
Salvation to me in the dark days of yore
I gladly announce it that others may SEE.

Poor old-round-pointed Pluggers the *best* to be had,
Were the means with which Dentists then "stuffed the old stumps.'
Without thee! I *too* would have been a luckless poor Lad
Hadst thou not redeemed me by (*c*) "*Her*" gentle thumps,

That sent the pure (*d*) "Bulls' Foil" down to the bottom
Of all the *small* places we dared to attack
Her force through the rushing in current "Per Saltem"
Securely induced it there closely to Pack—

And *stay there till this time* (as eyes can aver)
Despite all my ignorant innocent youth
Because thou wert with me the evil to blur
To lay a *Foundation* for thee and for Truth.

My constant companion for twenty-two years,
I acknowledge I'm tardy in *writing* thy fame,
Though oft I in using thee saved many tears
To myself not alone but to Patient the same.

But in *speaking* of thee to Pupil or brother
I have not shunned the whole council to declare,'
Be it to this one, to that, or the other,
The way of success for them, through thee to prepare.

Some thought *me* a *bore* the *Mallet* a *notion*—
Some who ne'er tried, "could do better without thee"—
"Than I could do *with thee*" (propelled by the motion
Of Pupil intelligent helper or me.)

" And " insert in a day (for a traveling Patient)
Full forty-five fillings as hard as could be,
And pocket the cash for work which is latent-
Disease, when compared to the work done by thee!

Then the Mallett—Pure gold—in Crystals or Foil,
A Head—well-informed, a Heart honest and free;
A Hand—well-instructed, acquainted with toil,
Combine them in action and *work* you will see.

Yes, *work* that will stand to the test of old time,
Whose finger disintegrates Rock, Shell and Tree—
No changes of season location or Clime
Have wrought, *can* work such changes in work done by thee.

All patients "prefer the Mallet to" "pushing,"
As all who have testified to me agree;
One only exception, who chose the rushing
Of hand force in packing, my Mallet, to thee—

Not only the patient but all who well use it
Know and acknowledge pre-eminence ever
(*e*) Try it Profession before you abuse it
And you'll be well paid for your honest endeavor.

Try it on Soft-Foil, Adhesive or stubborn,
Try it on Crystals of "Taft & Watt" or "Watts"
"Serrated pluggers" or those that are "point-worn"
Will pack it in "Cavities" "Fissures" or "Slots."

Try it for *safety* to tooth and mouth-tissue,
Try it for *ease* to thyself and thy patient—
Give it fair trial 'twill prove in the issue
Econ'my of power both active and latent.

Try it for "any thing" *fit* to fill teeth with.
(Osteoplastics, Amalgams and putty
Need no such inducement—lack-skill to deal with
That lays not within the pathway of duty.)

Be honest, patient—*persistently* use it;
A harvest 'twill bring you most rich rare and ripe;
Once well you *know* it you can not refuse it
As helper, as saver, economy's type.

(*a*) Dr. E. Merrit, of Pittsburgh, Penn., was the first one that I ever knew to use the Mallet.

(*b*) J. G. Moore of Painsville used the Mallet for me in 1847 or 1848.

(*c*) My wife was my first and best assistant, and my only "help" for several years.

(*d*) Bulls of Philadelphia was the first beater whose foil I ever used.

(*e*) Apostrophe to the Profession in favor of the Mallet.

Proceedings of Societies.

MINUTES AND PROCEEDINGS OF THE KENTUCKY STATE DENTAL ASSOCIATION.

At a meeting of dentists of the State of Kentucky, convened at the Phœnix Hotel, in Lexington, on the 24th day of April, A. D. 1860, pursuant to a general call previously given, Dr. J. A. McClelland was called to the chair as President, *pro tem.*, and Dr. W. Muir Rogers appointed Secretary, *pro tem.*

On motion of Dr. W. D. Stone a committee was appointed to draft and report a form of Constitution for the Association. The Chair appointed Drs. A. S. Talbert, R. Peckover and S. F. Davis said committee. Whereupon said committee retired, and after consideration Dr. Talbert, Chairman, made a report which was received and the committee discharged. The Association then proceeded to take up the Constitution as reported which was adopted, article by article as follows, to wit:

Artice 1. This Society shall be called the "Kentucky State Dental Association."

Art. 2. The officers of this Association shall consist of a President, a Vice President, a Secretary, a Treasurer—also an Executive and an Examining Committee, each consisting of three members.

Art. 3. The officers shall be elected by ballot at each annual meeting, and their duties shall be such as appropriately belong to such offices in other deliberative bodies—a majority of votes only being necessary to a choice.

Art. 4. This Association now forming shall be chosen from members of this convention by ballot, two thirds of all the votes being necessary to an election.

Art. 5. After the forming of this Association all applicants for membership shall be recommended by the Examining Committee and be balloted for as mentioned in the preceding article.

Art. 6. Any member may be expelled from the Association for immoral conduct, mal-practice or other sufficient cause, on motion of an investigating committee appointed for that purpose, by a two thirds vote of the members present.

Art. 7. This Association shall be composed of two classes —Acting and Honorary members.

Art. 8. Each member at his election shall pay to the Treasurer of this Association the sum of two dollars, and the same amount annually thereafter; and any member who shall fail to pay his annual dues for two successive years shall forfeit his membership.

Art. 9. No member of this Association shall take a student for a shorter period than two years, unless he shall have received previous instruction to equal that term.

Art. 10. The meetings of this Association shall be held at such time and place as the majority of the members present at each meeting may determine.

Art. 11. The Association may receive contributions in money, books or other property, which may be either used or sold in aid of its purposes.

Art. 12. Seven acting members shall be necessary to the transaction of business at the opening of any meeting.

Art. 13. In the event that a quorum can not be obtained at any regular meeting of the Association, the same time and place shall be adopted for the following year.

Art. 14. The President shall have the power to call a meeting of the Association at any time he may think proper.

Art. 15. It shall be the duty of the President to appoint some member or members of the Association to read at the ensuing meeting an essay or essays on any subject pertaining to the profession.

Art. 16. Constitution may be amended by a vote of two thirds of the members present at any regular meeting.

Names of Members.—A. S. Talbert, Lexington, Kentucky; W. W. Justice, Winchester, Ky.; Stoddard Driggs, Lexington, Ky.; Edm. J. Peckover, Nicholasville, Ky.; W. Muir Rogers, Shelbyville, Ky.; W. N. Moffett, Lexington, Ky.; J. J. Wilson, Lexington Ky.; R. Peckover, Paris, Ky.; John Holmes, Georgetown, Ky.; W. D. Stone, Lexington, Ky.; James W. Grant, Lancaster, Ky.; J. A. McClelland, Louisville, Ky.

The Association then proceeded to the election of members.

On motion, adjourned till 8 o'clock P. M.

TUESDAY EVENING, 8 O'CLOCK.

The Association went into the election of officers, whereupon the following gentlemen were declared duly elected, viz:

Dr. W. D. Stone, *President.*
" Richard Peckover, *Vice President.*
" W. Muir Rogers, *Secretary.*
" J. A. McClelland, *Treasurer.*

Executive Committee.—J. W. Grant, E. J. Peckover, W. Muir Rogers.

Examining Committee.—Stoddard Driggs, A. S. Talbert, J. W. W. Justice.

The Chairman then appointed Dr. R. Peckover and John T. Toland to conduct the President, elect, to the chair.

The Committee appointed to draft a list of subjects for discussion made their report which was received and adopted.

SUBJECTS OF DISCUSSION.

I. Filling Teeth.
II. Fang Filling.
III. Treatment of Alveolar Abscess Plate Work.
IV. Vulcanite Base—Amber Base.
V. Partial Dentures for Lower Jaw.
VI. Articulation of the Jaws for full Dentures.
VII. Miscellaneous.

On motion, Dr. George F. Foote was elected an honorary member of this Association.

On motion of Dr. Justice the time for speaking is limited to ten minutes to each member until all have spoken.

By consent the regular order of discussion is deferred until to-morrow and the Association went into a general discussion. Then adjourned until 9 o'clock A. M., to-morrow.

WEDNESDAY, 9 O'CLOCK A. M.

The Association met pursuant to adjournment. The preceding minutes were read and approved and the subject of Filling Teeth discussed.

On motion, the regular discussion was suspended and Dr. John Holmes, of Georgetown, Ky., was recommended by the Examining Committee for membership and was duly elected.

Communications from Dr. Isaiah Forbes of St. Louis and Dr. W. H. Atkinson of Cleveland, expressive of their sympathy and approval of the objects of this Society, were read and kindly received.

Dr. Richard Peckover of Paris, presented specimens of impressions of the mouth in a preparation of Paraffine, and a committee was appointed to investigate the fitness of this substance for dental purposes. Then adjourned until 2 o'clock P. M.

WEDNESDAY, 2 O'CLOCK P. M.

Met pursuant to adjournment. The committee appointed to consider the claims of Paraffine as a material for taking impressions and making patterns for Vulcanite Base, submitted their report which was received and placed on file.

Report of Committee on Paraffine.—The committee appointed to investigate the qualities of prepared Paraffine for taking impressions and making patterns for Vulcanite Base, submit the following report: It takes impressions sharp and from its exceedingly smooth property does not drag on being removed. The patterns for Vulcanite Base it would seem to answer better than Gutta Percha for the following reasons: It is easily adapted to the cast and does not spring from place as the Gutta Percha is apt to do.

J. A. McClelland,
A. S. Talbert, } *Committee.*
W. W. Justice.

A motion was made and unanimously carried, that the thanks of this Association be tendered Dr. Richard Peckover for the presentation of the Preparation of Paraffine to the consideration of this Association.

The subject of Fang Filling and of Alveolar Abscess were discussed, and Dr. Foote and J. T. Toland each made remarks with specimens and illustrations upon the process of making the hard Rubber Vulcanite and other Vulcanite Bases for artificial dentures. After which the remaining subjects were discussed in order.

On motion, *Resolved*, that when we adjourn we adjourn to meet in the city of Louisville, Ky., on the second Tuesday in April, 1861.

The Chair appointed Drs. J. A. McClelland, A. S. Talbert and W. Muir Rogers to read essays at the next meeting.

Resolved, That the Secretary is hereby instructed to prepare and furnish a copy of the minutes and proceedings of this Association to the *Dental Register* for publication.

Resolved, That the thanks of this Association be and are hereby tendered to the proprietors of the Phœnix Hotel for the gratuitous use of this room during our several sittings.

Drs. A. S. Talbert, J. A. McClelland and W. Muir Rogers are appointed Delegates to the National Convention to meet in Washington on the last Tuesday in July next, with authority to appoint substitutes.

The minutes were read and adopted.

On motion, the Association adjourned to meet in the city f Louisville, as before resolved.

W. MUIR ROGERS, W. D. STONE,
Secretary, *President.*

Correspondence.

Messrs. Editors:—A few days since, I came across another of these peripatetic teeth assassins, in a back street, near what is here known as the "Barbary coast," a locality exceedingly dangerous to financial navigation in consequence of the innumerable shoals and land sharks there abounding. He was conspicuously "topped off" with a green velvet cap, which was bespangled with a fabulous number of defunct molars sewed on in regular rows and all centering at the tassel at the apex, presenting, as you may suppose, a very striking and picturesque appearance. In his hand he held a substance of a pink color similar in appearance to a cake of toilet soap, and under his left arm the head of about a ten year old girl (on another occasion the head of a boy, and to which heads I wish it understood, there were bodies attached.) He was applying a portion of this substance to the incisors of the victim, expatiating meanwhile, to a curious crowd, on the virtues and transcendent qualities of his tooth soap in cleansing and whitening the teeth. He made no sales while I was present and I trust may make none, and thus be driven to some useful employment.

Sponge or Crystal Tin, which was noticed in the Dental Review for May, will not, I fear, result in any good. From some experiments made, I have discovered that the moment the crystals are removed from the solution, and washed free from acid, their surfaces become oxydized. While in the acid the surfaces are kept bright which secures strong adhesion, but the moment they become clouded or dimmed, as they do almost instantly in air or water, the adhesive quality is lost, and on pressure they fall into powder.

A friend suggests in this connection that a chemically pure tin foil, or at least tin entirely free from lead, is a desideratum in the profession.

Osteoplasty,—os—artificial, etc., are now assuming some importance.

A few days since a gentleman in the profession exhibited to me an upper set of teeth, of a block in one piece, mounted upon a silver plate by a composition resembling "hard rubber" the only attachment being this intervening substance. Now as it is well known that in consequence of the sulphur in the rubber acting upon silver, that the two cannot be combined, I was led to reflect as to the nature of this substance when the recollection of some experiments, made in this direction nearly four years ago with the oxyde of zinc, came into my mind, another secret was out.

These experiments, and which I desire to refer to here, were made with a freshly calcined oxyde of zinc and a highly concentrated chloride of zinc; and from the very hard substance produced by their combination (to which any appropriate color may be given by the addition of metallic pigments,) it was hoped that a plastic material had been discovered which could be made valuable in filling and mounting teeth. Accordingly a number of teeth were filled, and a piece of mechanical work, very creditable in appearance, was gotten up, in which single teeth were firmly and neatly mounted upon silver, presenting the general appearance of continuous gum work, and the only apparent objection to the material, at that time, was its *pungency* in the mouth.

The experiments however were discontinued, on its being demonstrated that the plugs were gradually dissolved—*that they would not bear the test of time.* Other substances, I suppose, might have been combined with the zinc to give it greater density and thus make it less liable to dissolve or disintegrate, or wear away in mastication, as well as reduce its unpleasant pungency; all of which, it is to be hoped, has been done by the gentlemen introducing these substances at this time, otherwise—and even with the additions, I fear—disappointment awaits all who have employed it in their practice. For other than temporary work I should be afraid to trust it, and I do hope therefore that some caution will be used in its employment as a filling.

A review of Tomes and Taft's recent works has just appeared in the "North American Medico-Chirurgical Review" for May. The article occupies some twelve pages, over four of which are devoted to the books in question, and the balance of eight pages to a history of the progress of dentistry in the United States. In regard to the first named work, the reviewer regrets that so large a portion of the book should be devoted to teething, which, he thinks, foreign to the subject, but with the further exception of the discussion of "dental tissues," (which it is thought does not properly belong in a work bearing its title,) the reviewer commends the balance of the book without reservation and says "to the remainder of the work we could cheerfully annex our sign manual," etc. Being so well pleased with the book he expresses a "regret that Mr. Tomes did not furnish us that which we so much need, a *complete* system of dental surgery," and further compliments it as "a model of composition at once pure, chaste and classical," and that it is "one of the most readable scientific books in the English language." As to Taft's work, he is not so complimentary, which is owing, he tells us, to "certain defects," "both of a scientific and literary character," which defects he notices with regret, because it is an American publication, but attributes these objectionable points to "a want of caution and consideration" and "not through ignorance of the author" and hinting at "precipitate" preparation and asserting its premature appearance.

In support of his charge of defects he cites the position taken by the author, of the inability of the teeth to undergo sudden transitions of temperature; questions whether there is such a condition as "inflammation of dentine," denies that the hardening of amalgam fillings "is caused mainly by evaporation of the mercury," with some two or three others of minor importance. Some of which defects, as will be seen, are of a controversial character.

He speaks kindly of the *illustrations* in the fourth chapter of the work—on instruments for filling and their manufacture,—and winds up with the expression of a hope that what has been said "will not be attributed to a spirit of fault-finding" and further says that "book-reviews are calculated to stimulate future authors to greater watchfulness rather than condemn works already written." This is certainly *very* encouraging to future authors. Now, after a careful reading of this review, and noting particularly the very limited number of defects that he has pointed out in the book, and the entire absence of a single word of commendation, I submit to the unprejudiced reader of this review whether there is not evidence of a palpable, manifest indisposition on the part of the reviewer to discover any good in it, and whether a spirit of complaint and fault-finding does not pervade the whole review? Why the book is not even "damned with *faint* praise," for there is not a single sentence that could by any known process of distortion be made to assume an equivocal meaning of a complimentary character; but the author is patted on the back and told that his "character as an operator, and as one anxious for the advancement of the profession, is second to none, and being fully competent to the task he undertook," etc., yet his production is unqualifiedly condemned, from the first to the last page, without the mention of one redeeming feature that could with honor be accepted by the author; and all this based upon some five or six defects only, which are all that has been cited, and which are offered, *and all that are offered*, be it remembered, in justification for such an unkind, unqualified, condemnatory critique.

Of one thing I feel assured, and that is that this review will operate on the profession as an overdose of a violent poison frequently acts upon the human system.

The remainder of the review, amounting to some eight pages, is devoted to a history of dentistry and commences with some reference to its antiquity, and noting its rapid improvement—more particularly mechanically—down to the present day, forming an interesting paper, a portion of which is a grouping together of many facts and statistics that have been published from time to time in the periodical press of the profession; also including some notice of the Dental periodicals with some suggestions to one of them, as to what is *not* proper matter for publication; and a criticism on the life, character and management of another now defunct; and information to the profession as to where they may obtain true, legitimate, nutritious professional pabulum, and which constitutes a first-rate notice of a third; and then closes with the hope that at some future day, not far distant, we "shall be called upon to notice some marked evidence of the continued advance of a science the prosperity and ultimate triumph of which we shall hail with the highest gratification."

Yours, O. U. C.

Philadelphia, May 11, 1860.

* * *

DENTAL PATENTS.

Messrs. Editors:—In the January number of the N. Y. *Dental Journal*, I find a communication over the signature of B. W. Franklin, which, I presume, is the long promised article which was to give me fits!! greatly to gratify the local and traveling agents of the American Hard Rubber Company and which they have since been using to still further intimidate the profession into the purchase of their *very* "liberal rights." I feel very badly under the influence of these unnatural *spasms!* but as Mr. F. is probably actuated by the same principles that governed a certain Quack Doctor, whose first effort in all cases was to throw his patients into fits because he was "h—l on fits;" I think I may hope for speedy recovery.

My dear Mr. Franklin takes exception to a brief "business notice" in the January number of the *Dental Register*, and lest the profession should not be aware that I am proprietor, he repeats it in *Itatics* some half dozen times for which I thank him.

Mr. F. seems greatly concerned lest the *Register* should lose the respect of its subscribers and the profession. What disinterested kindness! He also asserts that the respectable portion of the profession will not sympathize with me in my "interested opposition to all dental patents." If he offers himself as a specimen, I hope not. If Mr. F. or any one would inform me wherein my interests in opposing dental patents exist I would feel greatly obliged to them, for thus far it has been to me only a great sacrifice of valuable time and expenditure of money for printing, postage, and to investigate the claims of the few dental patents which I have opposed.

But I ask no sympathy. What I have done has been at *my own expense;* the course I have pursued has been on my own resposibility. After having satisfied myself of the correctness of my position, and feeling my obligations to the profession, I pursue that course which conscience dictates regardless of whom it pleases or whom it displeases, whether in opposition to some upstart impostor, or a boastful monied monopoly. Others may whine like blind puppies, Mr. Franklin particularly plaintive and low if he chooses, but for my part I appeal to no man's lachrymose propensities, but I *challenge* the respect of all *men* and I know that the *unsought* judgment of the profession coincides with my view of dental patents,—and especially cautious should we be of indefinite ones.

As regards the *Dental Register* I have the satisfaction of knowing, and I think I can prove beyond cavil, that it is in better condition now than ever before. It is edited better, printed better, and *pays better* than any other dental journal that I know of, and it is the only one in the United States which stands up fully to its prospectus and claims and receives payment INVARIABLY IN ADVANCE.

The readers of the N. Y. *Dental Journal* must hold its editors and publishers in very light esteem if they are willing to condemn me for being *proprietor* of the *Dental Register*, as their correspondent would fain have them to do, nor did I imagine that by having a *Dental Depot* I became any the more reprehensible on general principles, though I can well conceive how particular circumstances may alter cases, for is not Mr. Franklin *agent* of the A. H. R. Co. at a salary of $2,000 a year, with abundance of leisure to discuss abolitionism and its kindred vagaries? Does this make him so zealous and so brave that he must fight his own shadow to make fair weather with his masters? Why did not Mr. Franklin fairly and frankly meet the issue and state plainly and precisely what the Goodyear patent is? what the scope as well as the limit of their rights to the manufacture of materials as well as the extent and boundary of their rights to the vulcanizing or curing process? It is a well established fact that *no one can patent a principle.* What then is the formula by which they manufacture material? is it four ounces of sulphur to one pound of gum, or is it a pound of sulphur to a pound of gum, or is it a *secret?* If he had done this he would be entitled to the respect of the profession for fairness and honesty at least, even if he should not sell so many rights.

With equal adroitness the agent dodges the question regarding the decision against Roberts, and questions my veracity in regard to the urgency of the A. H. R. Co. to sell rights, and immediately after states the fact that threatening circulars were issued to the profession. What is to be thought of the veracity of one who so completely contradicts himself in two consecutive sentences? It may be about as reliable as his published experiments on the strength of metals and other materials used for dental plates.

Why did he not state that the case was contested to the end, that there was no compromise and that Roberts received no benefits for permitting injunction to be entered up against him? This would have been satisfactory, but he contents himself with the statement that "suits were commenced against Roberts, he employed able counsel and the court granted permanent injunction. Whether the case was 'manfully contested' I leave for others to determine." He leaves it for others to determine who have no opportunity to obtain the facts, because those in possession of them seem to be interested in withholding them. What sort of truth this implies will appear hereafter. I will here reply to Mr. Franklin's inquiry as to who the N. Y. correspondent of the *Register* was, that by application to the editors, Drs. Taft and Watt, he can ascertain. He ought to have known this much of the rules governing the press without being told especially so,—as it is known that the editors of the N. Y. *Dental Journal* and the agent of the A. H. R. Co. occupy rooms jointly at 640 Broadway, New York.

Mr. Franklin reiterates that Mr. Goodyear gave notice again and again, to the profession that if they used the vulcanite process, without a license from him, they would be prosecuted to the full extent of the law. Why these repeated and unnecessary threats? Is it, to say the least, courteous to the profession to cry them continually, stop thief! stop thief!! Either as before remarked this monopoly is uncertain in its pretentions, or it treats the profession as a band of dishonest men and thieves, through its mouth piece, (whether self-constituted or not) Mr. Franklin.

In justice to the A. H. R. Co., I must say that the position which they occupied with the profession was very different before this speciality was placed in charge of Mr. Franklin from what it has been since, inasmuch as he has destroyed the feeling of satisfaction with which the new improvement was anticipated.

The Dental Profession is composed chiefly of high-toned honorable gentlemen, who will not tamely submit to be treated like thieves, or driven like dogs, for, unfortunately, Mr. Franklin has gauged the profession by his own narrow contracted views, and, although I do not think that either Mr

Goodyear or the A. H. R. Co., would voluntarily take the position they now occupy, they cannot well avoid the responsibility of their agent, although they may say to the profession as did Macbeth to Banquo's Ghost, "Shake not thy gory locks at me, thou canst not say I did it."

Mr. Franklin, as well as the profession, has had ample opportunity to know my position on Dental Patents. I am not opposed to *all* Dental Patents, nor have I knowingly invaded the rights of any, but I am opposed to such patents as have not a valid claim as well as to those endeavoring to cover under a valid claim that which their patent does not guarantee to them. I am also opposed to the *policy* of professional patenting, but this matter rests with the profession and not me to regulate.

The insinuation cast upon my personal honesty, with which Mr. Franklin fitly takes leave of his readers, I can well afford to overlook; feeling perfect assurance and security in the rectitude of my own thoughts and intentions—I shall issue no intimidating circulars to enforce an acknowledgement thereof. He gives some good advice and informs us that *he has* embraced the idea that "honesty is the best policy," I would be glad to know at what particular period this occurred, as I doubt whether his most intimate friends have discovered the *change.* JOHN T. TOLAND.

The foregoing article was intended for the N. Y. Dental Journal for April, but as neither the Journal nor article have made their appearance, I have chosen this as the medium for my reply.

In the "Business Notices" of the present number of the Register will be found some additional information in regard to this much talked of subject and process.

PARAFFINE.

Paris, May 22, 1860.

Messrs. Editors :—In reply to many letters which I have received concerning my preparation of Paraffine, I would state that it can be used in taking impressions in all cases in which Gutta Percha is admissible ; but I need not say that it must be done carefully. The preparation must be warmed over a fire very gradually till soft enough, and the impression taken in the usual manner, care being taken to pass the finger over the surplus wax in the cup while in the mouth. After leaving the mouth, it should be plunged into cold water, and the plaster poured in. In vulcanite work it may be used instead of the Gutta Percha, or impression gum, by taking a sheet of the preparation of the requisite thickness, warming it and carefully pressing it on to the cast. You may then trim the labial sides to any required shape, paring it as thin as paper ; if necessary, dip it in cold water, and then proceed to fit in the mouth ; if it does not fit as well as you wish, you can press it so as to make it do so, and then pour plaster into it to suit your own views.

I throw these hints together that the profession may try the article, and if they like it on trial, use it—if not, throw it into their soldering lamp and burn it, for which it will answer as well as oil.

I am, gentlemen, your ob't serv't, R. Peckover.

The article can be obtained of Jno. T. Toland.

* * *

A CALL.

There will be a meeting of the Mississippi Valley Association of Dental Surgeons on the second Tuesday of June, at 7½ o'clock, P. M., at the office of Dr. Jas. Richardson, No. 271 Walnut street, in this city, for the purpose of appointing delegates to the National Association, to meet at Washington City in July next. It is desirable that there should be a full attendance.

Geo. Watt, Sec'y. W. H. ATKINSON, Pres't.

Editorial.

The boy that encountered and killed the skunk, explained to his comrades that he would have kept out of the fight if he had known the thing *wasn't a cat;* but as he had to endure the stink, he thought he might as well have the victory. Like him, we have got into a controversy by being mistaken in the nature of the animal; and being deceived into it, like him, we conclude to go through with it.

We have before referred to a couple of articles, written by an anonymous contributor, and published in the American Journal, one of them on Dental Periodicals, and the other on Dental Societies. We thought these articles did injustice to our profession, and presuming that they were written by a member of the same, we noticed them as we thought they deserved. We, also, gave a description of the mental condition of a dentist who could write such stuff. In the April number of the Journal the writer, to show that our description of him is inaccurate, says: "Nor have we ever been of the *profession,* or of the *auxiliary* branches of science, as understood by the American Dental Convention."

Now, the boy, in the case referred to, could not blame the skunk for deceiving him; for, though it looked something like a cat, it didn't profess to be one. But this writer in both his former articles, professes to be a member of the Dental Profession, and now, when cornered, confesses himself an *outsider.* True, he says: "I inadvertantly made use of the word *our* in connection with the profession in some places." Most of his readers will conclude that he was persistently, at least, if not impertinently inadvertent. Some will admit his pleas, and some will think he used the term on purpose to deceive When the jackdaw decked himself in stolen plumage, and went into peacock society, why did he not set up the plea of *inadvertance,* when about to be packed out for his impudence?

Just think of it, reader. Here is a man who has never "been of the profession," "never been present at any meeting of any Dental Society whatever," and yet, in one of our journals, he denounces our periodicals, condemns our associations, ridicules the greater part of the profession, and *lectures* the remainder, criticises and burlesques our style, (in miserable English at that), intimates that our endeavors after improvement are contemptible efforts, in short, does everything that a *modest* man would not do, and all this while *pretending* to be one of our number. How kind it was in him, after informing us that all our societies—local as well as national—have proved worse than failures, to tell us just how to get one up! As kind as the owl that, without invitation, gave free lectures on music, to a class of thrushes and nightingales; and as consistent and reasonable as the *ass* that told the horses that if their ears were larger, their tails less bushy, their eyes less bright, and their necks less arched, they would make a much more respectable appearance.

Since we have undisguised our man, we have no disposition to continue a controversy with him, no desire to shoot the last, or even any arrow; for we agree with him that a man who will assume a *false character* that he may the more effectually impugn the motives and actions of others, is too small a mark for our aim. We suppose this is his idea when he says of us: "He shall enjoy his apparently much prized practice of shooting the last arrow, for his aim is far too inaccurate, and his *mark too small* for us to feel the least concern." The italics are ours.

The late article of this contributor is entitled "CORRECTIONS." He might correct some *few* errors of his own. We never intimated that the "Mississippi Valley Association" was other than a local society. On the contrary, we referred to it to prove that local societies are not all failures. Again, we never abandoned our gold for our pen; and if we did, whose business is it! But he is excusable for these, and for many other mistakes, as he is yet laboring under his "mathematical hallucination," as all who understand the English language can readily see, by comparing his last two articles with each other.

In reference to one of our remarks on his former articles, this writer says: "We are correct in thinking that the most saucy Grube Street author would not have assailed us with such a miserable quibble as this," which may be all true. We are not acquainted with the authors on that street; and we make it a rule not to dispute with a man, when we are not in possession of the facts and he is. We take it for granted that our friend has a thorough acquaintance with these authors; for if not, how could he affirm so positively that he is *correct* in his conclusions as to what they would or would not do?

Near the conclusion of his article, in speaking of us, he says: "The fertility of his resources at length appear to be exhausted,—for, far from seizing our evident meaning, he presumes to intimate," etc. He is responding, here, to the concluding part of our former article; and at this point, or "at length," he suspects that the fertility of our resources is exhausted, because we are "far from seizing" his evident meaning, which amounts to a pretty plain intimation that before this exhaustion took place, we were not "far from seizing" his evident meaning. Hence, all his previous efforts at making "corrections," are, by his own statement, lost labor.

He does not like our criticism on his "outline" of a plan of organization for a Dental Society. He says: "We should remember that, among intelligent men, special provisions is always made for the reception of the words of the wise." We did remember this, and taking it for granted that he was an intelligent man, were surprised that he had made no such special provision in his outline.

But it is time to close. We are perfectly willing to be advised in regard to Dental Periodicals and Societies, by tinkers, cobblers, farmers, mechanics, physicians, lawyers, preachers or philosophers, provided they sail under their own colors; but we are not willing that pirates should profane *our* flag. W.

CHEMICAL ANALYSIS.

In the May number of the "American Dental Review" there is a curious editorial on "OS-ARTIFICIAL." We have nothing to say of the *gross* misrepresentations contained in the first paragraph; for our comrade is able to take care of himself. Were it not for a single sentence in the second paragraph, we would not have had any thing to say.

Roberts' "Os-artificial" being under consideration, the "A. B." editor says, "I ask—why has not the Professor of Chemistry analyzed it, and published the results to the world? It is the universal practice among the Universities of Europe to take up and analyze every new patent medicine or secret nostrum—."

His autocratic "*I ask,*" would lead Mrs. Partington to think he was the "Professor over all the Faculties." It may be as he states among the universities of Europe; but the chemists are as universally paid for their labors. We dislike the tone in which the question is asked. He appears to think he has a right to demand the special labors of the professor of chemisty. But we will *imagine* that the question is put with all due respect, and that the writer wishes a candid answer. We would state, then, that the "professor of chemistry" is already weighed down with more important chemical researches, that, for the last seven years, he has *given* more mental labor to the profession than he has devoted to his own interests, that he has had but two days of mental relaxation in these seven years, and that he has been so foolish as to suppose he would receive the sympathy of those for whom he labored, instead of an arrogant demand for more toil. This last we know is a humiliating confession of weakness.

In conclusion, *I ask*—why has not "A. B." hired some good chemist of his vicinity to analyze it, and publish the results to the world? As he is so very anxious about it, we wonld inform him that the way is still open. He can as well afford to pay a neighbor for doing it, as we can afford *our* time to do it. W.

A CORRECTION.

We observe in the May number of the "American Dental Review" some editorial remarks upon *Os Artificial,* in which the writer makes some strictures upon our remarks made in the April number of the Dental Register on the same subject.

On this subject we should have nothing further to say, had we not been grossly misrepresented by A. B., and things attributed to us we did not say, and this designedly, for he evidently had our language before him.

He says: "He tells us that it is *invaluable* for building crowns of teeth which are partially broken away, and that it *will* last from two to five years."

Now, what we did say is this: "Again, it is valuable for filling teeth that are very much decayed, and for building up crowns that are partially broken away." "It is valuable in this respect only for molars and bicuspids." Now, the only difference between A. B.'s quotation and the truth, is the difference between *invaluable* and valuable. *Invaluable*—precious above estimation ; so valuable that its worth can not be estimated. *Valuable*—having value or worth ; having some good qualities, which are useful and esteemed.

In regard to the time which it will last, we are represented as saying that it *will* last from two to five years. The following is what we did say, viz : " Of course, it will wear down with more or less rapidity, according to the force with which the teeth are used, but it *seems* to be sufficiently firm to wear for a considerable time, *probably* from two to five years."

Most persons would conclude that there was some qualification in regard to the durability of this material, as expressed above ; but of course some allowance should be made for difference of opinion. We would suggest that A. B. be a little more careful in his quotations in the future, especially if he intends to maintain a reputation for veracity.

In regard to what we said of *os* artificial, we have as yet not one word to retract. With this we did just what we do in all such cases—speak just what we think at the time, according to the light we may have.

When we deem it important to direct the attention of the profession to any particular matter, we aim to present the merits and demerits, so that those who desire to know, may arrive at a tangible conclusion.

We were not investigating its composition—we supposed every one knew as much about that as it is important to know. Various formulas of a similar character have been published in almost all the journals during the last year. T.

The italics in the above quotations are our own.—Ed.

* * *

Chemistry for Farmers—The elements of Chemistry as applied to Agriculture. By C. B. Chapman, A. M. M. D., Professor of Chemistry.

This is a work gotten up for farmers and schools. It is the application of Chemistry to agriculture, a very important subject. It alone can reveal what is all important to be known to the agriculturalist; without it he labors in the dark. The work to which we refer is designed to give the needed information upon all the important particulars connected with this matter. The work embraces nineteen chapters, in which the subjects are naturally and most conveniently arranged. A clear and concise consideration of the elements is first given. Those elements that enter into the composition of soil and plants are more prominently set forth, in their combinations and mixtures. The subjects of manures, their natures, varieties, and application are clearly discussed. Every one who takes any interest in the subject of agriculture (and who should not) cannot fail to be interested and instructed by a perusal of this little work, but to the farmer it will be almost invaluable, as he will find there just what he wishes to know, without any circumlocution, or redundancy of language, expressed in language he can understand. It is published by W. B. Smith & Co., of this city, and may be obtained wherever their school books are for sale. T.

* * *

We copy the following from the Vulcanite. We can only say now that a death like this brings sorrow to every one acquainted with the subject of it.—Ed.

" It becomes our painful duty to record the death of Dr. Alvan Blakesly, of Utica, N. Y. The circumstances attending his death are of the most melancholy character. As near as we are able to learn, Dr. Blakesly left Utica about the middle of last month to recuperate his health, his system having become debilitated by constant application to business. His physician and numerous friends advised him to go South for a short time, in order, if possible, to regain his health. He stopped at a friend's a short time in this city, expressing a desire that no one should know of his being here, giving his reason that he was too unwell to see them. He took passage in one of the Savannah steamers, in company with an acquaintance of his from Utica ; and, on or before their arrival at Savannah, Dr. Blakcsly was missing, it being believed that he had fallen overboard and was drowned. The circumstances connected with his mysterious disappearance from the decks of that steamer may forever remain a mystery to man ; but his many virtues, his companionable and gentlemanly deportment, and his efforts to elevate his profession by friendly intercourse, will be remembered by many who will ever cherish for his name the fondest recollections."

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